



SPAWAR
Systems Center
San Diego

TECHNICAL DOCUMENT 3137
April 2002

Accomplishment Report for Fiscal Year 2001

SSC San Diego C⁴I Programs Office Philadelphia

Approved for public release;
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SSC San Diego

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SSC San Diego
San Diego, CA 92152-5001

SSC SAN DIEGO
San Diego, California 92152-5001

P. A. Miller, CAPT, USN
Commanding Officer

R. C. Kolb
Executive Director

ADMINISTRATIVE INFORMATION

The work described in this report was performed for the Naval Air Systems Command, the Naval Sea Systems Command, and the National Imagery & Mapping Agency by the SSC San Diego C⁴I Programs Office Philadelphia.

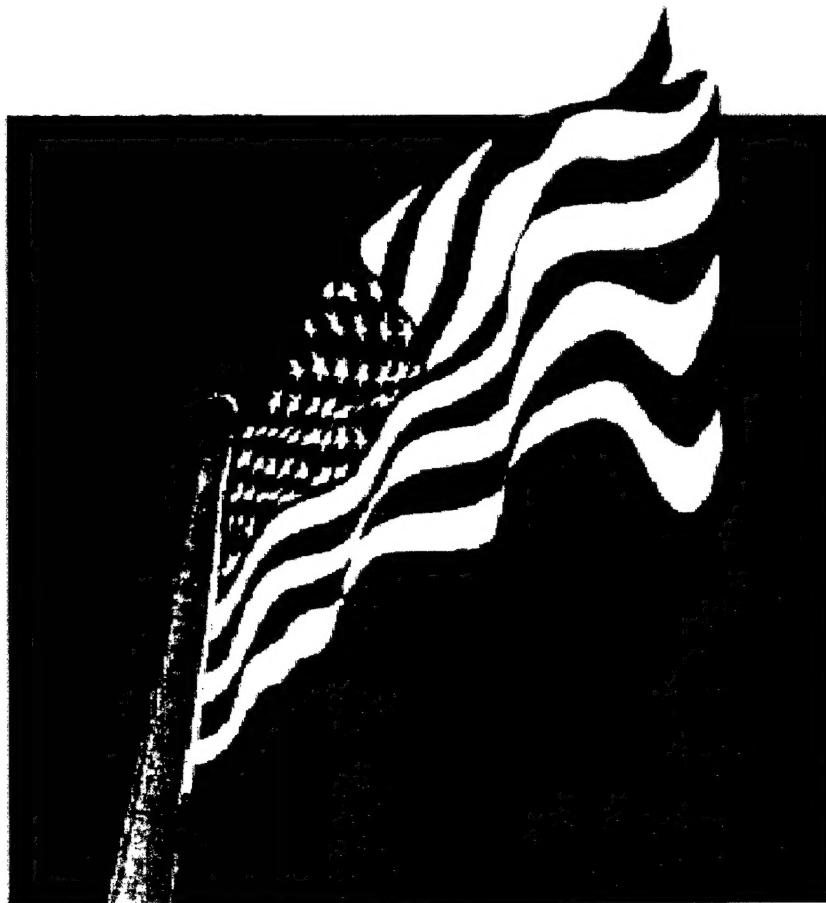
Released under authority of
D. J. Rozanski, Head
C⁴I Programs Office Philadelphia

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**CUSTOMER
SATISFACTION
Is Our Only
PRODUCT.**



INTRODUCTION

Space and Naval Warfare Systems Center (SSC) San Diego C⁴I Programs Office Philadelphia is an integral unit of the Command and Intelligence Systems Division (Code 242). SSC San Diego C⁴I Programs Office Philadelphia has provided comprehensive development and systems engineering, acquisition planning, integrated logistics, installation and technical services support to fleet, DoD, and military clients since its inception in 1971 as the Naval Intelligence Processing System Department, Naval Air Engineering Center, Philadelphia.

Throughout the years, SSC San Diego C⁴I Programs Office Philadelphia has developed and maintained a cadre of skilled personnel to provide a full spectrum of in-service engineering support services worldwide to systems supporting strike and mission planning, electronic photographic processing and exploitation, and imagery archiving afloat and ashore. During fiscal year 2001 (FY01), SSC San Diego C⁴I Programs Office Philadelphia provided technical support to:

- ◆ Commander, Naval Air Systems Command
 - ❖ Program Executive Officer, Strike Weapons and Unmanned Aviation (PEO(W))
 - ◆ Command and Control Systems Program Office (PMA-281)
 - ❖ Program Executive Officer, Tactical Aircraft Programs (PEO-(T))
 - ◆ Naval Mission Planning Systems Program Office (PMA-233)
 - ◆ F-14 Program Office (PMA-241)
- ◆ Commander, Naval Sea Systems Command
 - ❖ Aircraft Carrier Program Office (PMS-312)
 - ❖ Amphibious Warfare Program Office (PMS-377)
- ◆ Naval Electronic Logistics Office (NELO)
- ◆ National Imagery and Mapping Agency (NIMA)
- ◆ Other DoD, inter-service, joint, national and allied commands and program offices.

Directed by a civilian manager, SSC San Diego C⁴I Programs Office Philadelphia is staffed by 64 career civil service engineers, information technology specialists, logisticians, administrative and security support personnel. SSC San Diego C⁴I Programs Office Philadelphia's efforts are complemented by one hundred and eighty contractor engineering and technical support personnel. SSC San Diego C⁴I Programs Office Philadelphia's internal structure is depicted in its Organizational Chart, Figure 1.

SSC San Diego C⁴I Programs Office Philadelphia subscribes and adheres to the principles of the High Performance Organization (HPO) concept. Key staff members and support personnel participated in a special three-day HPO training seminar in FY01. A graphic depicting SSC San Diego C⁴I Programs Office Philadelphia's Principles of Operation is illustrated in Figure 2.

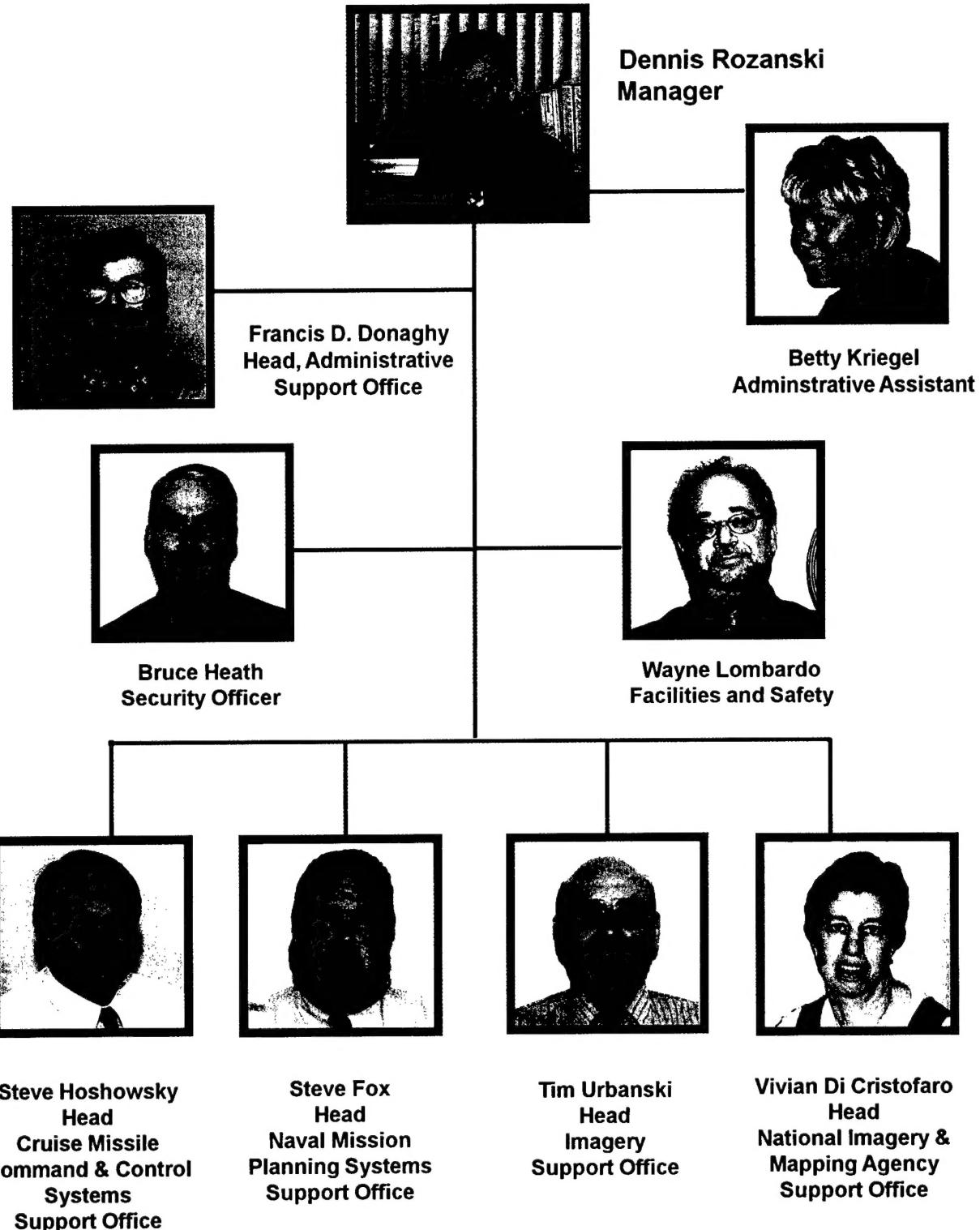


Figure 1.
Organizational Chart for
SSC San Diego C⁴I Programs Office Philadelphia

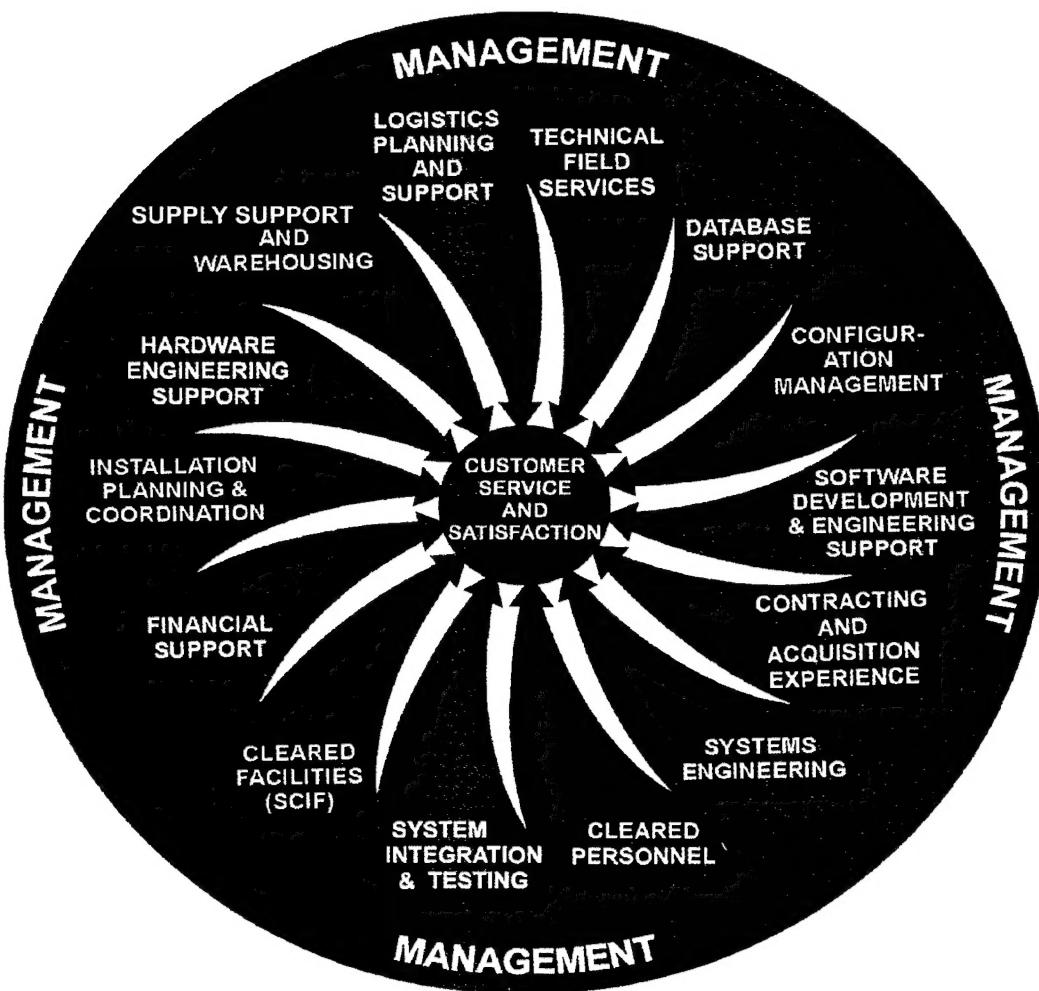


Figure 2.
Principles of Operation
for SSC San Diego C⁴I Programs Office
Philadelphia

SSC SAN DIEGO C⁴I PROGRAMS OFFICE PHILADELPHIA LOCATION AND FACILITIES

Location:

SSC San Diego C⁴I Programs Office Philadelphia is located in Buildings 2 and 7, Naval Support Activity (NSA) Philadelphia compound, 700 Robbins Avenue, Philadelphia, Pennsylvania. NSA Philadelphia is easily accessible by public transportation and to several major highways, which include the Pennsylvania and New Jersey turnpikes, Interstate 95, and US Route 1. The Philadelphia International Airport is 30 minutes south on I-95. Rail service is available through either the Philadelphia or Trenton, New Jersey stations. See Figure 3.

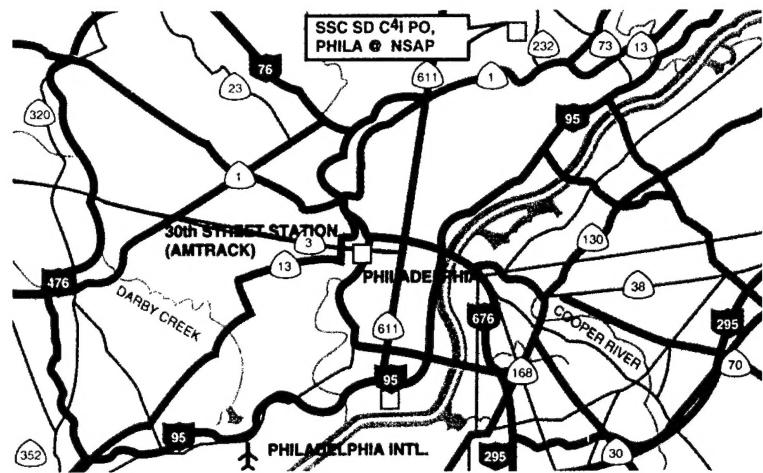


Figure 3. Philadelphia Area

Facilities:

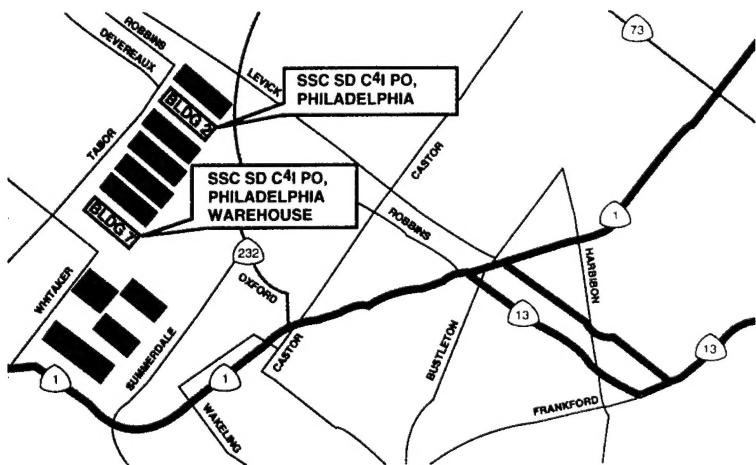


Figure 4. Naval Support Activity Philadelphia Buildings

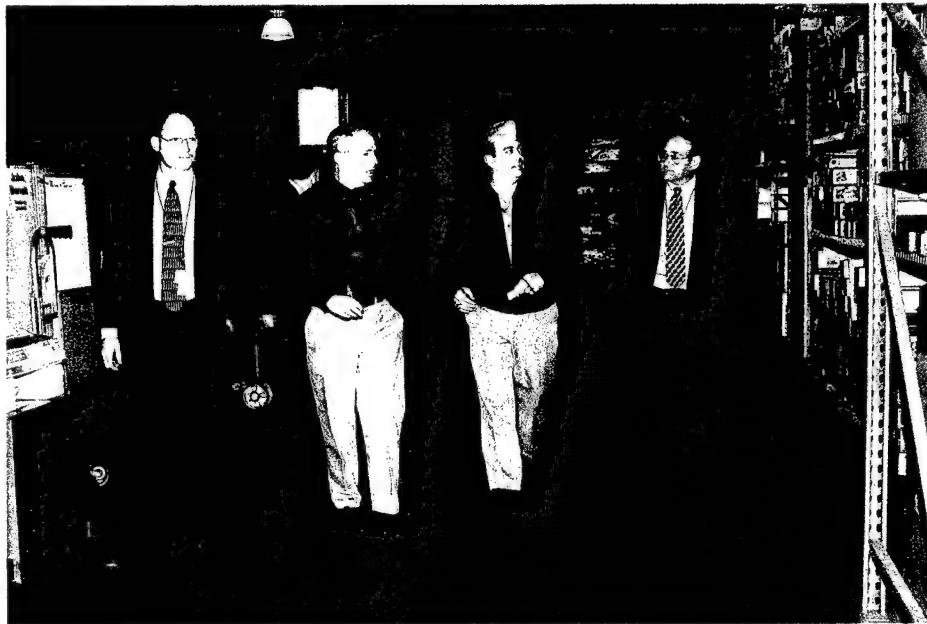
SSC San Diego C⁴I Programs Office Philadelphia occupies 39,443 square feet of administrative and support laboratory space in Building 2. Within the laboratory, the office has established a world-class consolidated Help Desk to support fielded systems, a Strike Interface Test Facility (SITF), and several secure laboratory spaces that support a sensitive compartmented information facility (SCIF) and special access program (SAP) rooms. Administrative, engineering and technical support areas are also located in Building 2.

SSC San Diego C⁴I Programs Office Philadelphia maintains 47,574 square feet of combined-use facility in Building 7 for system integration and warehousing operations. Current plans call for an expansion of the integration area and a reconfiguration of the adjacent storage areas to better support the fabrication and testing of integrated systems. The relative location of Buildings 2 and 7 on the NSA Compound is depicted in Figure 4.

VISITS

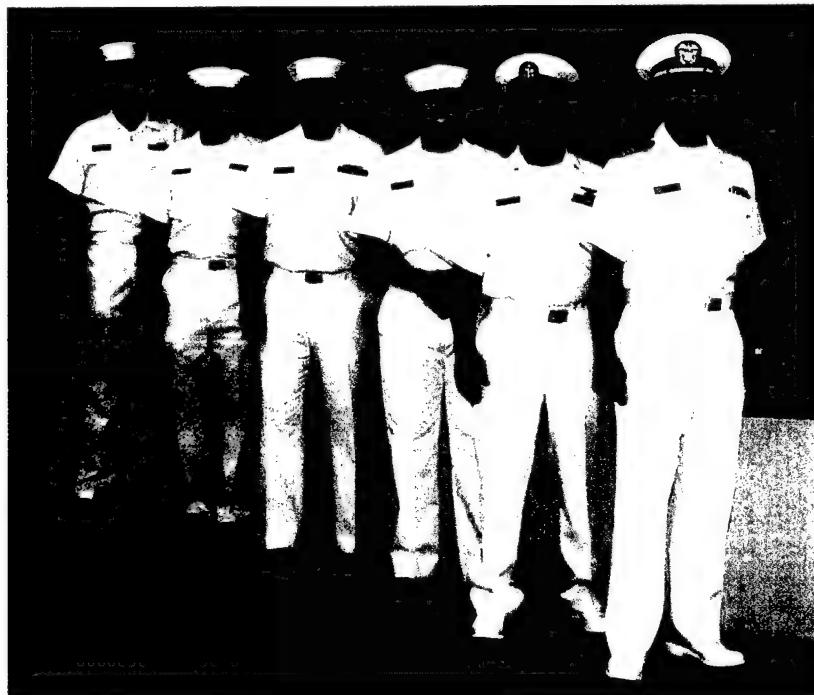


In March 2001, SSC San Diego visitors toured the SSC San Diego C⁴I Programs Office Philadelphia facilities. Pictured from left to right are: Mr. Rod Smith, Head, Command & Control Department, Dr. R. C. Kolb, Executive Director, SSC San Diego, Dr. R. Jaffee, Head, Command & Intelligence Systems Division, Fred Wahler, Manager, SSC San Diego C⁴I Programs Office, and Captain Ernest L. Valdes, USN, Commanding Officer, SSC San Diego.

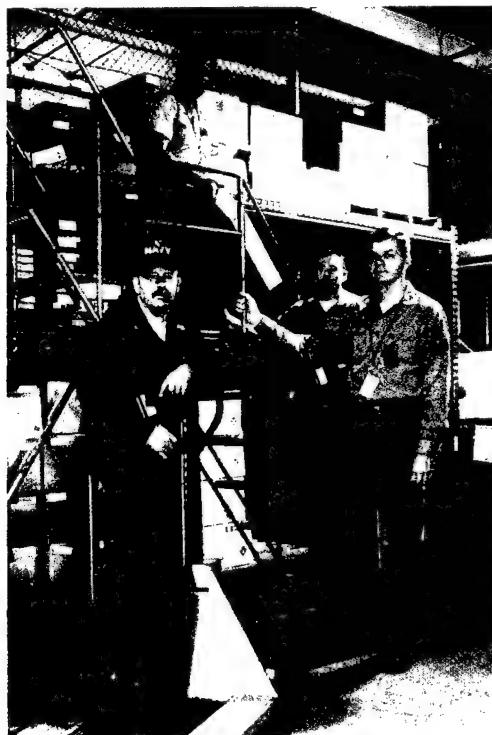


Mr. Rod Smith, Captain Ernest L. Valdes, and Dr. R. Jaffee are given a tour of SSC San Diego C⁴I Programs Office Philadelphia's warehouse operation by Bruce Heath, Security Officer.

VISITS



The Naval Reserve Air System Command provided reservists from NR NASC 0109 Saint Louis, Missouri, Unit 15 for warehouse support to the NavMPS Support Office. The reservists are from left to right: AZ1 Cooksey, AK1 Gates, AKC(SEL) Rosencrans, AT3 Neunaber, ATC Fischlein, and LCDR Farley.



Reservists working in the warehouse are as follows, clockwise from left to right:

*AK1 Jeff Gates,
AKC(SEL) Keith Rosencrans,
AT3 Doug Neunaber,
and AZ1 David Cooksey.*

AWARDS AND RECOGNITION

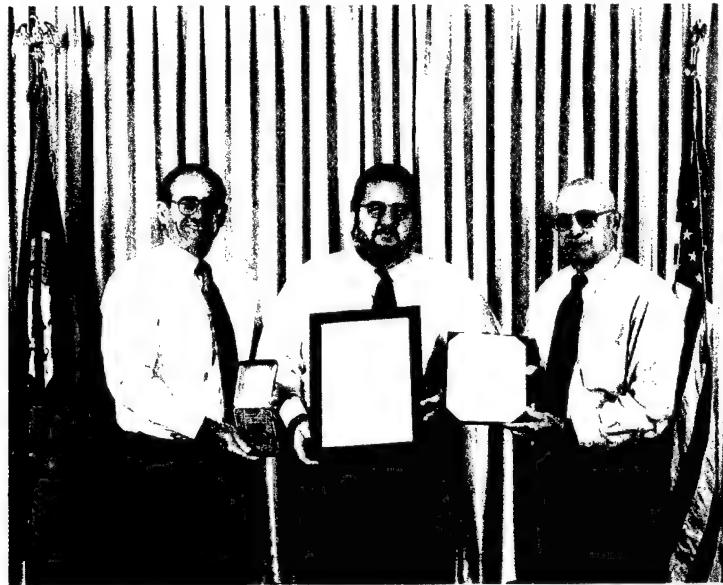


Captain Ernest L. Valdes, Commanding Officer, SSC San Diego, Dr. R. Jaffee, Head, Command & Intelligence Systems Division, Mr. Rod Smith, Head, Command & Control Department, and Dr. R. C. Kolb, Executive Director, SSC San Diego congratulate Fred Wahler, Manager, SSC San Diego C⁴I Programs Office Philadelphia on his retirement.



Captain Ernest L. Valdes and Dr. R. C. Kolb present Fred Wahler with his Certificate of Retirement, his Retirement Plaque, and his Retirement Letter. Mr. Wahler retired in April 2001 with 37 years of service. The leadership of SSC San Diego C⁴I Programs Office Philadelphia was transferred to Mr. Dennis Rozanski, former Head of the Cruise Missile Command & Control Systems Support Office.

AWARDS AND RECOGNITION



Steve Fox receives a Certificate of Special Congressional Recognition for earning the Navy Meritorious Civilian Service Award and his Navy Meritorious Civilian Service Medal from Dr. R. Jaffee and Fred Wahler.



Dennis Rozanski receives his Certificate of Appreciation in Recognition of Outstanding Contributions to the Advancement and Success of Acquisition Reform in the Department of the Navy from Captain Ernest L. Valdes and Dr. R. C. Kolb.

AWARDS AND RECOGNITION

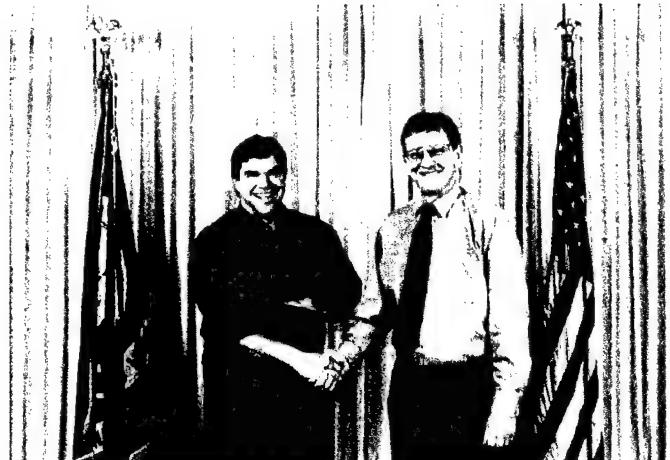


Dennis Rozanski congratulates Al Gaidis on receiving his Exemplary Achievement Award for superior installation support to the Cruise Missile Command & Control Systems Support Office.

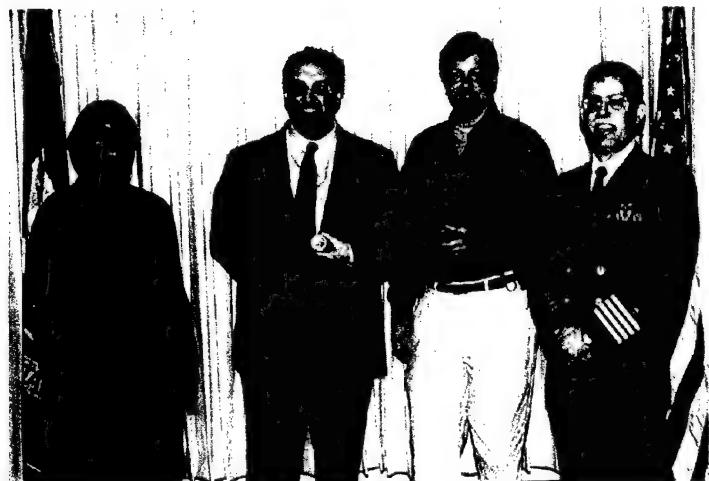


Barbara Wiley is congratulated by Dennis Rozanski and F. D. Donaghy on receiving the SSC San Diego Command and Control Department Code 240 Distinguished Achievement in Leadership Award for superior support to the Project Support Offices within the SSC San Diego C4I Programs Office Philadelphia.

AWARDS AND RECOGNITION



Frank Greco is congratulated on receiving the SSC San Diego Command and Control Department Code 240 Distinguished Achievement in Project Accomplishment Award by Dennis Rozanski.

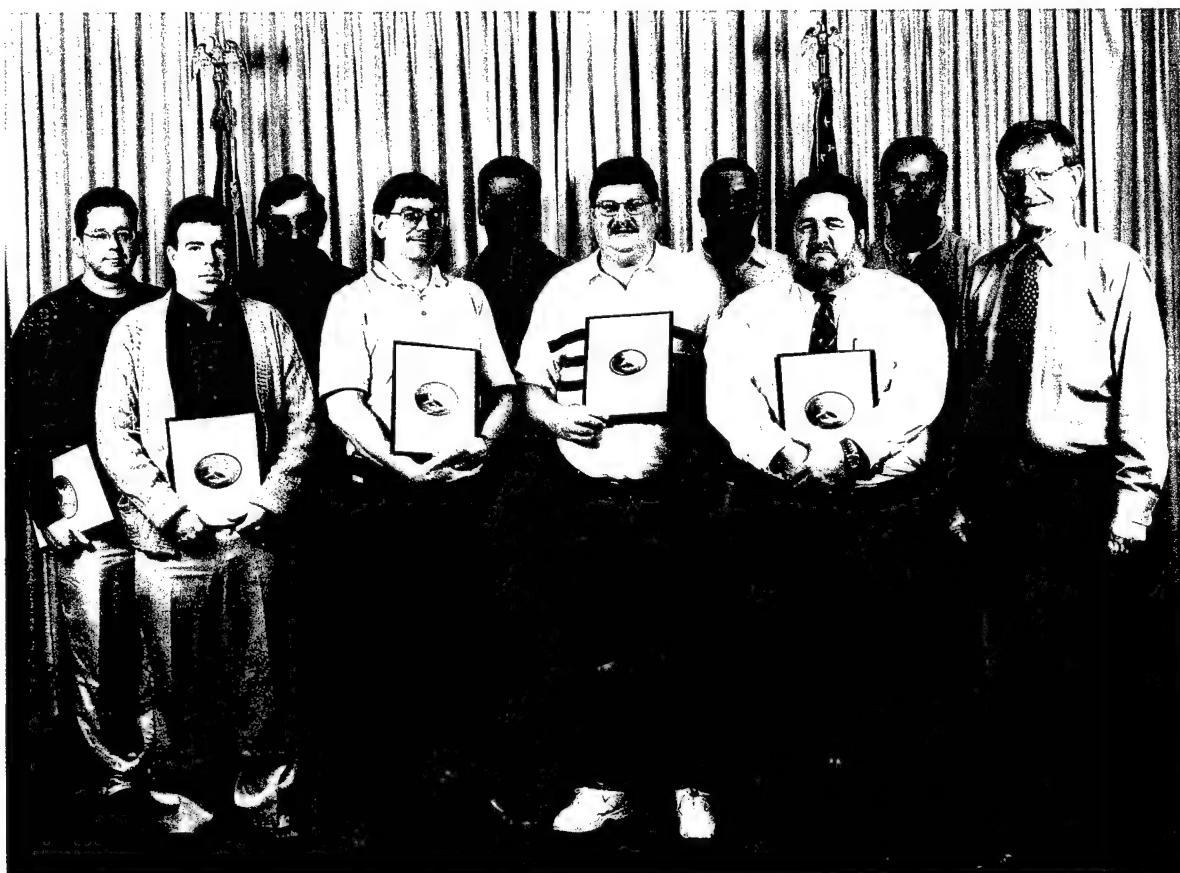


Paul Meisinger and Joe Mountain are congratulated on receiving a Naval Air Systems Command Coin from Captain Moebius, PMA-233, and Oreta Stinson, PMA-233.

AWARDS AND RECOGNITION



Fred Wahler presents Joe Di Pardo with the Combined Federal Campaign Coordinator's Award.



Dennis Rozanski, right front, presents a Letter of Appreciation to the NavMPS Support Office Team members for TAMPS 6.2.1 software development service to PMA-233. Team members from left to right in the first row: John Sheplock, J. C. Fitzgerald, Deputy, Craig Doster, and Steve Fox, Head. Second Row: Timothy Boyce, Paul Steinbacher, Bob Grant, Chris LaBohne and Kevin O'Malley.

AWARDS AND RECOGNITION

Career Service Awards



Steve Hoshowsky receives his 25 year Career Service Award from Captain Ernest L. Valdes and Dr. R. C. Kolb..



Barbara Wiley receives her 25 year Career Service Award from Dr. R. Jaffee and Fred Wahler.



Joel Cohen receives his 25 year Career Service Award from Captain Ernest L. Valdes, and Dr. R. C. Kolb.



Mary Williams receives her 25 year Career Service Award from Dr. R. Jaffee and Fred Wahler.

AWARDS AND RECOGNITION

Career Service Awards



Mark Cunningham receives his 20 year Career Service Award from Captain Ernest L. Valdes and Dr. R. C. Kolb.



Paul Meisinger receives his 20 year Career Service Award from Fred Wahler.

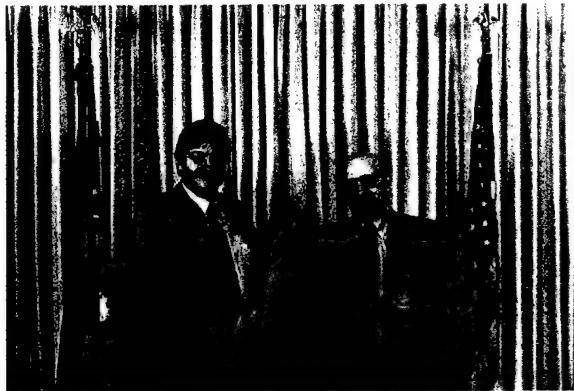


Nhan Nyguen receives his 10 year Career Service Award from Dr. R. Jaffee and Fred Wahler.

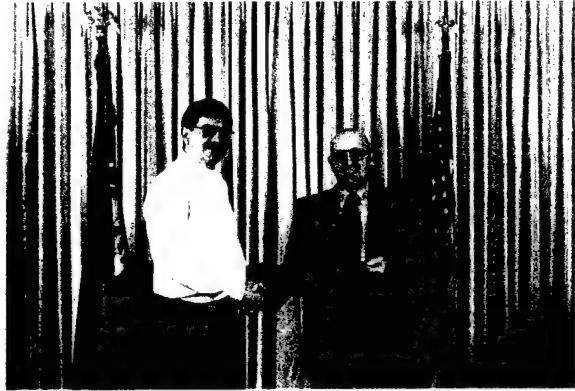


Robert Grant receives his 10 year Career Service Award from Dr. R. Jaffee and Fred Wahler.

AWARDS AND RECOGNITION



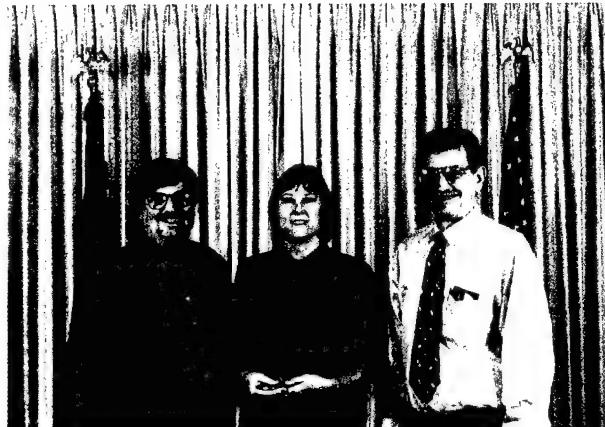
Steve Hoshowsky receives his Bravo Zulu Service Award from Fred Wahler.



J.C. Fitzgerald receives his Bravo Zulu Service Award from Fred Wahler.



Rhea Feldman and Charles Soule receive their Bravo Zulu Service Awards from Dennis Rozanski as Tim Urbanski observes.



Eileen Nikander receives her Bravo Zulu Service Award from Dennis Rozanski as F. D. Donaghy observes.

Norbert Reis, Mike Finlay, and Craig Doster received Bravo Zulu Service Awards from SSC San Diego during a Video Teleconference (VTC).

BRING OUR CHILDREN TO WORK DAY

On April 26, 2001, the Naval Support Activity, Philadelphia hosted "Bring Our Children to Work Day." Thirty-nine children participated by accompanying their parents or guardians to experience the world of work and to gain insight on how various careers contribute to the workforce. The children toured the facility and shadowed their parents to observe daily job activities.



From left to right:

First Row: Megan Alexander, Anna Kralle, Marissa Kohn, Patrick Costello, and Brian Gassert.

Middle Row: Raymond Costello, Rachel Sohn, Kelsy Kalberer, Keith Wagner, Nicole Giberson, and Meagan Barnes.

Rear Row: Grace Melunis, Gloria Melunis, Kristina Kitano, John Kitano, Laura Nikander, Karen Wiley, and Megan Kalberer.

BRING OUR CHILDREN TO WORK DAY



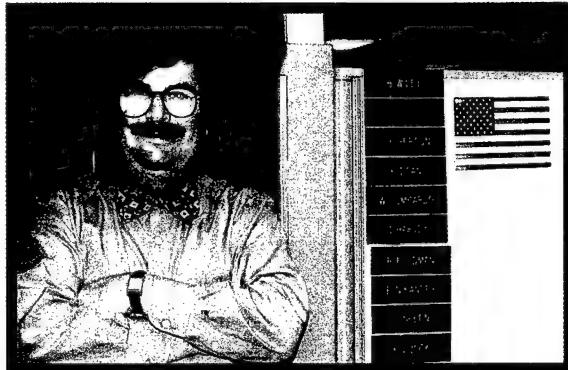
From left to right:

First Row: Samantha Wagner, Christine Watson, James Jackson, Brendon Lambert-Ryan, Alexandra Colassi, Zachary Feldman, and Kelsi Rodgers.

Middle Row: Brittany Shields, Kenny Rogers, Kimberly Cohen, Kate Cohen, Shante Jackson, Brian Padgeon, and Tim Kriegel.

Rear Row: Jessica Hodnicki, Rachel Young, Brian Sohn, Andrew Kearny, Patrick Giberson, Jennifer Harris, and Maria Cohen.

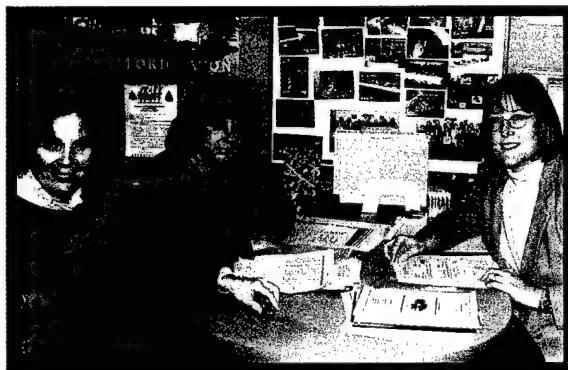
ADMINISTRATIVE SUPPORT OFFICE



*Francis D. Donaghy, Head,
Administrative Support Office*



*Barbara Wiley, Deputy
and Program Analyst*



*Rhea Feldman, Acquisition Specialist,
Lisa Giberson, Program Assistant, and
Eileen Nikander, Acquisition Specialist*



*Mary Ann Grockett,
Security Assistant*

ADMINISTRATIVE AND ACQUISITION SUPPORT

The Administrative Support Office (ASO) is responsible for providing direct support to projects assigned to SSC San Diego C⁴I Programs Office Philadelphia in planning, budget, acquisitions, and security functions. The ASO also oversees warehouse operations, telecommunications support services, and coordinates with the host activity in local facility management. A statistical summary of FY01 efforts is provided in Table 1.

Table 1. Administrative Workload FY01

Purchase requisitions	174
Credit Card transactions	1257
MILSTRIPS	48
FedEx bills of lading (non-DLA)	2884
Prompt payment invoice certifications	341
Travel orders	520
Correspondence	98
Training documents	123
Messages	667
Shipping documents (DD1149)	1857
Classified documents and other media	1971
• Held	660
• Destroyed	109
• Transmitted	1202

As integral members of SSC San Diego C⁴I Programs Office Philadelphia Project Support Office teams, ASO personnel provided expertise in program planning, analysis and budget execution, acquisition planning, documentation, and Contract Officer Representative (COR) duties. The ASO supported new or improved facilities design, coordinated operational/physical security, materials handling and inventory management services. Staff members received awards for leadership, rapid acquisition support of New York City emergency relief operations, and SAP implementation training.

CONTRACTING

The ASO maintains close working relationships with SSC San Diego budget and accounting offices, SSC San Diego C⁴I Programs Office Philadelphia project sponsors at Naval Air Systems Command, National Imagery and Mapping Agency, and other DoD military departments. ASO provides liaison and support in determining funding requirements and strategies, expediting receipt and acceptance of funds and documentation, and preparing and disseminating periodic and issue specific reports and records. In FY01 SSC San Diego C⁴I Programs Office Philadelphia's Total Obligational Authority (TOA) was \$64.9 million. A summary is provided in Figures 5 through 7. SSC San Diego C⁴I Programs Office Philadelphia's TOA increased \$3 million from the prior year. Greater than seventy percent of the amount was from Navy sources and the remainder from other DoD services and agencies. Orders for goods and services for nearly \$51.7 million were processed throughout the year. Over seventy percent of these acquisitions were awarded competitively. As in the past, the primary contracting agency utilized for procurement support was the Fleet and Industrial Support Center (FISC) Norfolk Detachment Philadelphia.

In July 2001, as part of a Navy series of enterprise resource planning (ERP) pilot programs, SSC San Diego implemented Systems, Applications, and Products in Data Processing (SAP) R/3 as the business operations planning and execution tool for Navy Working Capital Fund (NWCF) activities. The transition to SAP resulted in a complete replacement of the SSC San Diego's extant financial support processes, procedures and reporting systems. A period of intensive training accompanied the transition. The ASO acted as the focal point for local training and transition activities.

Additional acquisition requirements were satisfied through the government purchase card program. A total of 1,257 purchase card transactions valued at \$2.8 million was conducted in FY01. In September, SSC San Diego C⁴I Programs Office Philadelphia's purchase cardholders participated in the Navy-wide training and successfully completed the requisite Naval Supply Systems Command (NAVSUP) computer based training (CBT) course.

For the five major multi-year support contracts, SSC San Diego C⁴I Programs Office Philadelphia provides the technical and administrative assistance to the FISC Contracting Officer through the assignment of trained and experienced Contracting Officer's Representatives (CORs). The current CORs supporting these contracts are:

Judith Jolly, Technical and Facility Support Services
Eileen Nikander, Engineering, Fabrication, and Installation Services
Dean Kralle, Engineering and Repair Services
Frank Davies, Engineering and Technical Services
Anthony Brancato, Imagery Support Services

**SSC SAN DIEGO
C⁴I PROGRAMS OFFICE
PHILADELPHIA**

**FY01 FUNDING
BY AGENCY**

TOTAL: \$64,909,800

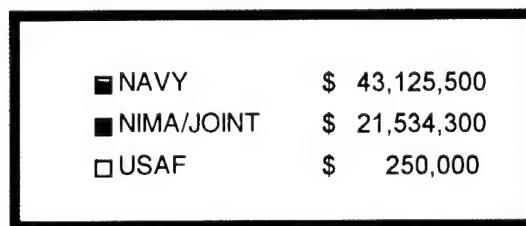
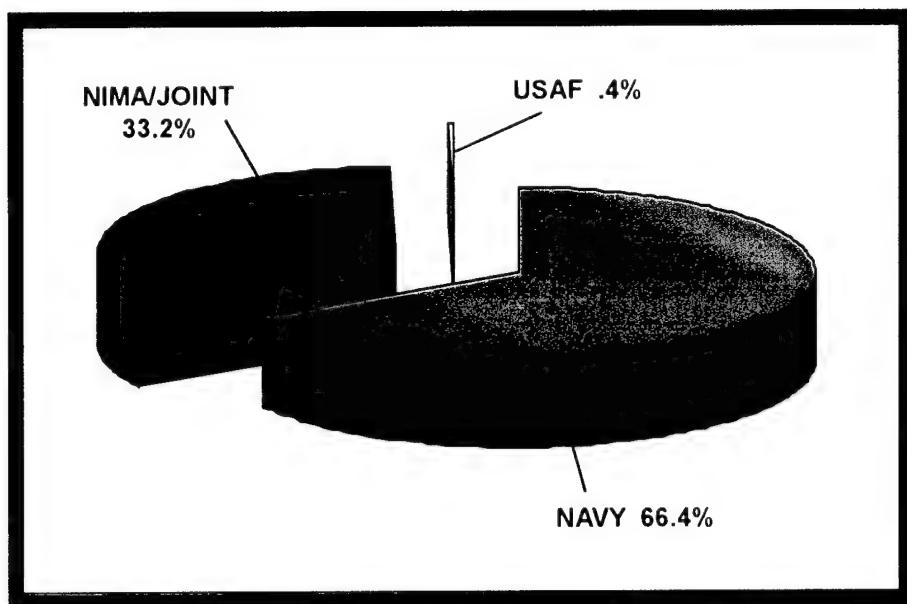


Figure 5. Funding By Agency

**SSC SAN DIEGO
C⁴I PROGRAMS OFFICE
PHILADELPHIA**

**FY01 FUNDING
BY APPROPRIATION**

TOTAL: \$64,909,800

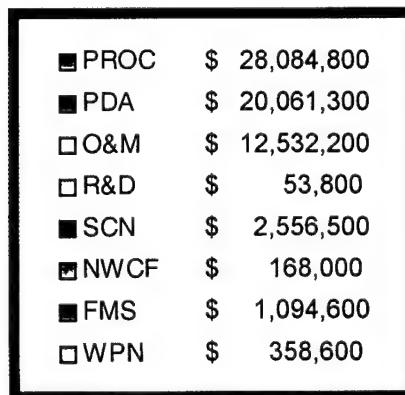
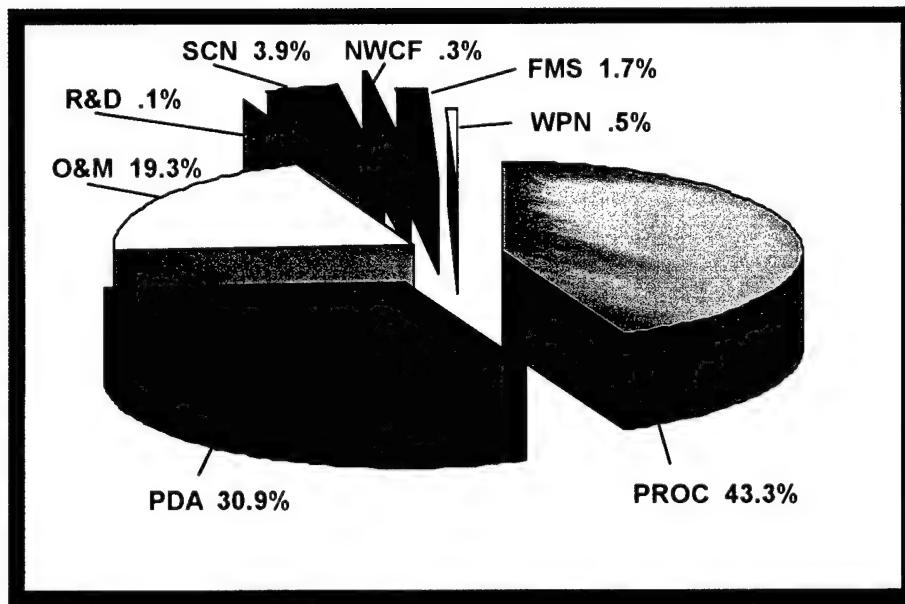
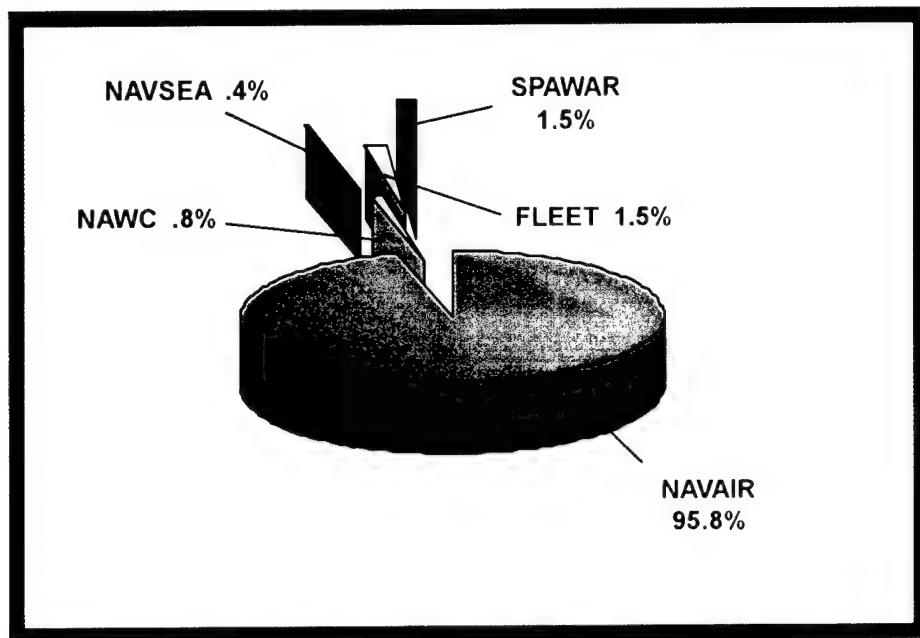


Figure 6. Funding By Appropriation

**SSC SAN DIEGO
C⁴I PROGRAMS OFFICE
PHILADELPHIA**

**FY01 FUNDING
BY NAVY CLAIMANT**

TOTAL: \$43,125,500

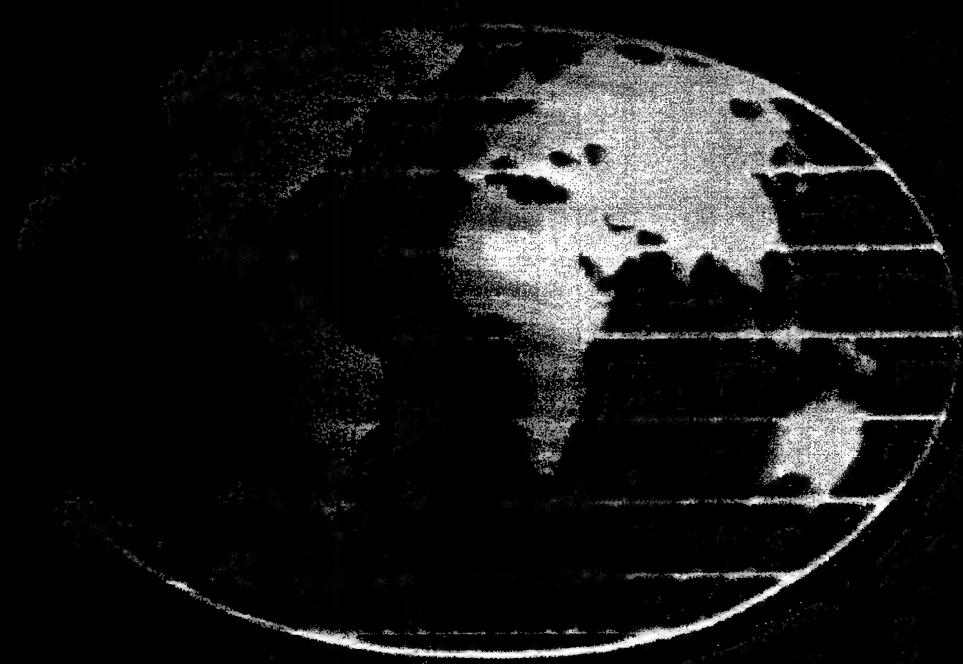


<input checked="" type="checkbox"/> NAVAIR	\$ 41,315,500
<input type="checkbox"/> NAVSEA	\$ 184,700
<input type="checkbox"/> NAWC	\$ 340,400
<input type="checkbox"/> FLEET	\$ 654,700
<input type="checkbox"/> SPAWAR	\$ 630,200

Figure 7. Funding By Navy Claimant

TECHNICAL ACCOMPLISHMENTS

2001



STRIKE INTERFACE TEST FACILITY



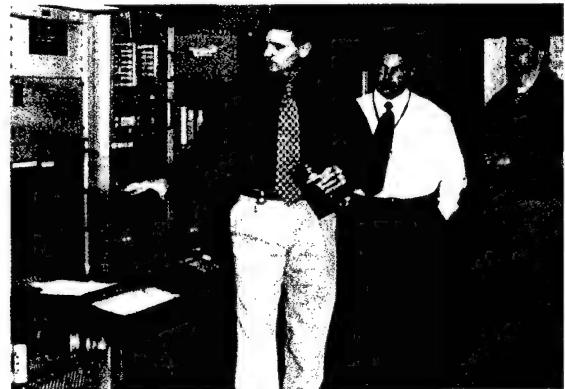
SSC San Diego visitors Captain Ernest L. Valdes, Dr. R. C. Kolb, Mr. Rod Smith, and Dr. R. Jaffee tour the Strike Interface Test Facility as Kevin O'Malley explains and Dennis Rozanski observes.

SSC San Diego C⁴I Programs Office Philadelphia established a Strike Interface Test Facility (SITF) to combine all the primary systems that are used by the mission planners aboard aircraft carriers. These systems include the Imagery Product Library (IPL), the Precision Targeting Workstation (PTW), the Digital Camera Receiving Station (DCRS), the Tomahawk Land Attack Missile (TLAM) Afloat Planning System (APS), the Launch Platform Mission Planning (LPMP) System, the Global Command and Control System-Maritime (GCCS-M), the Tactical Automated Mission Planning System (TAMPS), and the Navy Portable Flight Planning Software (N-PFPS).

This unique configuration is one of the first shore-based facilities with all currently fielded equipment operating in an Integrated Shipboard Network Systems (ISNS) certified networked environment. The equipment and network connections of the lab can be readily modified to match any current or projected shipboard configuration. The SITF is staffed and maintained by experts in the development, installation, support, and operation of each system. In FY01, SSC San Diego C⁴I Programs Office Philadelphia expanded the SITF to improve the provision of operational procedure development, testing, training, and fleet support services for both deployed military units and developmental systems.



Rich Jackstis demonstrates TAMPS.



Kevin O'Malley explains the configuration of the SITE.

CRUISE MISSILE COMMAND & CONTROL SYSTEMS SUPPORT OFFICE

SSC San Diego C⁴I Programs Office Philadelphia is the In-Service Engineering Activity (ISEA) to the Cruise Missile Command and Control Program, PMA-281, and provides planning, engineering, and logistical support for installation and maintenance of fielded systems. Tasking encompasses support for the Tomahawk Mission Planning Center (TMPC), Joint Service Imagery Processing System-Navy (JSIPS-N), and Afloat Planning System (APS) configurations. The sites are configured as TMPC or tactical APS/JSIPS-N suites and since no two suites are identical, installation normally includes alterations to site facilities and systems. The Cruise Missile Command & Control Systems Support Office works closely with the Commander, Naval Air Force Atlantic (COMNAVAIRLANT) and the Washington Planning Center (WPC) to integrate and implement new systems into the Fleet. These efforts are focused to develop a more functional Aircraft Carrier Intelligence Center (CVIC).



The Cruise Missile Command & Control Systems Support Office produces and updates installation guides for all the systems under its cognizance. This information combined with the collected data from other CVIC systems is used to plan for the orderly installation and implementation of new hardware and the upgrading of existing systems. During FY01, SSC San Diego C⁴I Programs Office Philadelphia supported this effort by providing technical assistance and participating in System Engineering Working Groups (SEWG) design reviews and other technical meetings. In addition, SSC San Diego C⁴I Programs Office Philadelphia provided liaison with other Program Offices to ensure that this information was available for the management and decision making process.



*Steve Hoshowsky, Head,
Cruise Missile Command & Control
Systems Support Office*



*Bill Nork, Deputy,
Cruise Missile Command & Control
Systems Support Office*

The Cruise Missile Command & Control Systems Support Office Logistics team produced and updated all Integrated Logistic Support (ILS) documentation for sites receiving installations and upgrades. All ILS documentation, including technical manuals and training curriculum, is available on the **LifeLine** website. Total migration of information to **LifeLine** was a major accomplishment. Installation and technical support schedules, fielded configurations of all ships/sites, Logistics Support Library (LSL) documentation, training curriculum, status reports, Points of Contact (POC), and other critical information are accessible on **LifeLine**. The Logistics team visited 28 of the 30 sites supported.

The ILS Planning and Supply Support Management teams played a vital role in the procurement and availability of initial and sustaining spares, Pack Up Kit (PUK) critical spares, COTS life cycle support, development of Allowance Parts Lists (APL), and ICAPS data. Our logistic response to field failures continued to be excellent using the FedEx service and online ordering system.

The 24x7 Help Desk was consistently complimented for support to the Fleet. Response time to resolve technical problems and Casualty Reports (CASREPS) was significantly improved and noted by the system users. A Help Desk newsletter covers technical tips and general information for the operator. Further improvement to the Help Desk's communication with the Fleet is the implementation of SIPRNET capability. This capability provides the advantages of increased availability, less bandwidth traffic, and a secure infrastructure for communication.

Point of Contact:

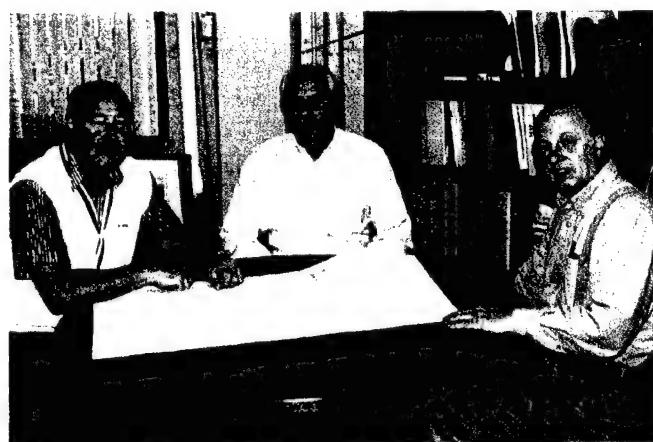
Mr. James Barnes, Code 24232
Tel: (215) 214-8021, DSN: 442-8021
Email: barnesj@spawar.navy.mil
SSC San Diego C⁴I Programs Office
Philadelphia



Jim Kitts, Logistics Support



*Jim Barnes, Logistics Support
Dennis Alexander, Logistics Support
Frank Davies, Logistics Support*



*Dean Kralle, Logistics Support
Bohdan Sobkiw, Logistics Support
Joe Di Pardo, Logistics Support*

TOMAHAWK MISSION PLANNING CENTER

Role:

- **Overall coordination of Tomahawk Land Attack Missile (TLAM) Mission Planning Systems (MPS)**
- **Installation Planning, Implementation and Suite Light-Off/Checkout**
- **Direct On-Site Support and Upgrade Implementation**
- **Configuration and Uniformity Management**
- **Integrated Logistics Support**
- **Security Guidance and Assistance**
- **Coordination of Rapid Deployment Suite (RDS) Engineering and Integration**

SSC San Diego C⁴I Programs Office Philadelphia supported all of the following PMA-281 programs during the FY01: TLAM Mission Planning Systems (MPS), Tactical MPS (TMPS); fleet training center shore sites; MPS sites at Cruise Missile Support Activity, Atlantic (CMSA LANT), Pacific (CMSA PAC), the United Kingdom (CMSA UK); and the Navy, Washington Planning Center (NWPC). Operations/facilities supporting TMPS include the Afloat Operational Support Detachments Atlantic (AOSD LANT), Pacific (AOSD PAC), and the Commander, U.S. Naval Forces Fifth Fleet (COMFIFTHFLT). Naval training commands supported include the Naval Strike and Air Warfare Center (NSAWC), the Naval and Marine Corps Intelligence Training Center (NMITC), and the Fleet Intelligence Training Center, Pacific (FITCPAC).

PMA-281 tasking encompasses support for the Theater Mission Planning Center, Joint Service Imagery Processing System-Navy (JSIPS-N), JSIPS-N Concentrator Architecture (JCA) and Afloat Planning System (APS) hardware and systems. Although the sites are usually configured with TMPC, APS and/or JSIPS-N suites, no two sites are identical. Installation and upgrading require extensive collaboration with site management regarding planning, material acquisition, and shipments, and normally include alterations to existing facilities and systems.

System upgrades applied to CMSA LANT include the installation of two additional Digital Imagery Workstation Suite Afloat (DIWSA) Configuration Consolidation (C²) workstations and the replacement of the obsolete TLAM Planning System (TPS) Redundant Array of Independent Disks (RAID) memory systems. A Precision Target Workstation (PTW) 4.1 and a JCA with an Image Product Library (IPL) were also installed. CMSA PAC was fitted with a PTW 4.1 system with four client workstations and given a comprehensive on-site power survey. The implementation of extensive security improvements entailed the removal of unused cables; identification, inventory and tagging of all remaining wiring; and the complete rewiring of the telephone system. Work accomplished at the NWPC ranged from hardware installation(s) to planning of improvement(s) of space and stackable hardware arrangements. A system groom and software upgrades were completed at CMSA UK following facility improvements.

The TMPS suites located at AOSD PAC and NSAWC are in mobile shelters capable of being rapidly deployed to any land or shipboard platform. Primarily used for training, these suites have been called upon to support local real-time operations during periods when CMSA sites were down for maintenance, upgrades or exhibited limited capabilities. Since the need for deployment has been reduced due to

shipboard installations, an effort to relocate these suites to permanent quarters is in process. Early in FY01, AOSD LANT was consolidated and relocated into a permanent Sensitive Compartmented Information Facility (SCIF), which SSC San Diego C⁴I Philadelphia designed and constructed. Well within scheduling and budget parameters, the Cruise Missile Command & Control Support Office team achieved the hardware move, system groom, software reload, recertification, and reaccreditation. AOSD PAC received a JCA with an IPL that required an extensive rearrangement of shelter-installed hardware. This effort extended the serviceability to FY04 when AOSD PAC will be merged with CMSAPAC. SSC San Diego C⁴I Philadelphia collaborated with SPAWAR Systems Center Charleston, South Carolina, concerning the planning for the relocation of this site to a new building in FY03.

While supporting the various training facilities employed by PMA-281, the Cruise Missile Command & Control Support Office devoted extensive planning with representatives and trainers to meet comprehensive requirements and tailored needs for each respective installation. Designated as a PMA-281 test and training site, NSAWC received numerous system(s) modifications, including the first Navy Tactical Input Segment (TIS) and one of the first shore site JCA installations. NMTC received a customized JCA, IPL, and PTW 4.1 installation allowing them to train 18 students simultaneously while offering the experience of actual system operations. A site survey and several planning meetings were conducted for the JCA, IPL, and PTW 4.1 installation at FITCPAC, which will replicate a shipboard environment in order to exercise operational scenarios. The initial installation will take place early in FY02 with expansion of capabilities later in the year.

Every site was visited during the year to ensure system operational and physical integrity. Maintenance of site documentation and drawing packages continually evolves, as does the training of on-site personnel regarding logistical matters, plant maintenance, and supply support.

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AFLOAT PLANNING SYSTEM (APS)

Role:

- **Technical Services**
- **Installation Planning**
- **Testing Support**
- **Integrated Logistics Support**

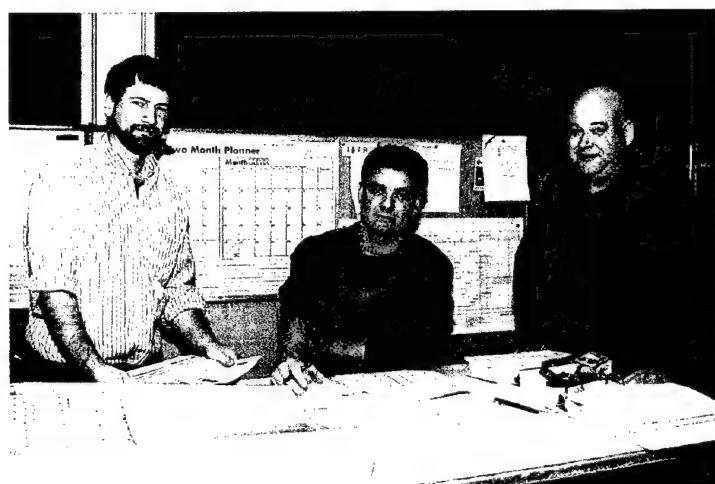
The Tomahawk Command and Control System is configured into the shore-based Theater Mission Planning Center and an APS for shipboard use. The APS system comprises a Digital Imagery Workstation Suite (DIWS), a Mission Distribution System (MDS), a Tomahawk Planning System (TPS), a SCI Isolation Segment (SIS), a Strike Planning Archive (SPA), and a Precision Targeting Workstation (PTW).

APS provides each Battle Force/Battle Group (BF/BG) afloat with the same functional capability as the shore-based Cruise Missile Support Activity (CMSA) for planning conventional Tomahawk Land Attack Missile (TLAM) missions. During crisis surge and/or hostile activity, the afloat commanders use APS for mission planning without dependence on non-organic assets or long-haul communications for management information system data.

In FY01, the Cruise Missile Command & Control Systems Support Office coordinated, installed, and tested the APS hardware and software on four platforms: the *USS Enterprise* (CVN 65), the *USS Carl Vinson* (CVN 70), the *USS Theodore Roosevelt* (CVN 71), and the *USS Harry S. Truman* (CVN 75).

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*Jim Engelke, Installation Support
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JOINT SERVICE IMAGERY PROCESSING SYSTEM - NAVY (JSIPS-N)

Role:

- **Engineering/Technical Services**
- **Installation Planning**
- **Testing Support**
- **Integrated Logistics Support**

The Joint Service Imagery Processing System – Navy (JSIPS-N) is a digital imagery processing and management system. The JSIPS-N system receives, processes, stores, and disseminates imagery products and imagery intelligence based on multi-source imagery from national and tactical sensors. The primary mission of JSIPS-N is to assist Strike Planners, Tactical Aviators, and Marine Corps Amphibious Planners in the delivery of precision ordnance on target. The secondary missions are to provide near real-time imagery and support to fleet intelligence assets and Special Operations Forces and to support primary exploitation and dissemination of tactical imagery intelligence products.

The Cruise Missile Command & Control Systems Support Office effort for FY01 included coordinating the installation of hardware and software and testing the JSIPS-N system onboard Aircraft Carriers, Amphibious Assault and Amphibious Command class ships, and at several shore sites. Other accomplishments during FY01 included a market study in support of a high quality flat panel display initiatives Engineering Change Proposal (ECP), prototype development and integration of the NIMA Product Server (NPS), and a custom container for the Precision Targeting Workstation (PTW) and Image Product Library (IPL) server racks. The Cruise Missile Command & Control Systems Support Office hosted the IT-21 LAN Certification Testing for JSIPS-N and other programs in our Strike Interface Test Facility (SITF).

SSC San Diego C⁴I Programs Office Philadelphia participated in the selection, procurement, integration, evaluation, and installation of Precision Targeting Workstation (PTW) 4.0 hardware onboard *USS Coronado* (AGF 11) for Fleet Battle Experiment (FBE) India and provided system support for the Time Critical Strike Demo for Sixth Fleet. The Cruise Missile Command & Control Systems Support Office conducted PTW 4.0 interface testing in our SITF, and designed, fabricated, integrated, and fielded the PTW 4.0 Stereo Client Workstation. The team provided JSIPS-N hardware engineering support and hardware installation for the new Strike Team Trainer at the Navy and Marine Intelligence Training Center (NMITC) and for the shipboard team training facility at the Fleet Intelligence Training Center, Pacific (FITCPAC).

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SSC San Diego C⁴I Programs Office Philadelphia

NAVAL STRIKE WARFARE PLANNING CENTER (NSWPC)

Role:

- **Compilation and Analysis of System Data**
- **Space Utilization and Design**
- **Installation Planning Support**

SSC San Diego C⁴I Programs Office Philadelphia produces and updates installation guides for all the systems under its cognizance. The installation guides contain the system's Installation Control Drawings (ICD) and the parametric data necessary to prepare the Ships Installation Drawings (SID), which are required to install equipment onboard a ship. The information from these installation guides and the collected data from other systems located in the Aircraft Carrier Intelligence Center (CVIC) are used to plan for the orderly addition of new equipment and the updating of existing systems.

During FY01, the Cruise Missile Command & Control Systems Support Office supported the NSWPC Phase I CVIC Integration effort, Newport News Shipbuilding (NNS), and PMS-312. Engineering provided the calculation, design, and fabrication of the equipment rack foundation interface plates for the Shipboard Modularity Arrangement Reconfiguration Technology (SMART) System for the *USS Nimitz* (CVN 68). All planned hardware repairs were completed, and the software was installed and validated by NSWPC. Since each equipment rack in SMART Track compartments is unique in position and mass, the calculations and engineering drawings packages were critical to the fabrication of individual foundation interface plates. These plates were fabricated following the guidance of the NAVSEA Structural Code 251.

SSC San Diego C⁴I Programs Office Philadelphia began planning for the NSWPC Phase II CVIC Integration, which will involve the Naval Mission Planning Support Office (NavMPS) and the Imagery Support Office (ISO).



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NAVAL MISSION PLANNING SYSTEMS (NavMPS) SUPPORT OFFICE

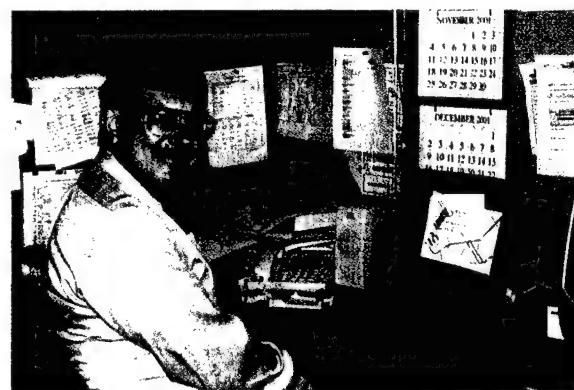
SSC San Diego C⁴I Programs Office Philadelphia is responsible to providing comprehensive support to the Naval Mission Planning Systems (NavMPS) family of interactive graphic computer systems supporting aircrew mission and strike planning for United States Navy and Marine Corps airborne weapon systems. Capabilities provided by the NavMPS Support Office include collection/validation of system requirements, logistics support, basic through advanced operator training, system engineering/certification services, customer support desk, training/support visits by regional support teams, and direct operational support by deployed onboard site representatives.

During FY01, the NavMPS Support Office facilitated operational testing of Tactical Automated Mission Planning System (TAMPS) version 6.2.1, distributed and supported installations of Navy Portable Flight Planning Software (N-PFPS) versions 3.1.1, 3.1.2, and introduced the Common Mission Data Loader (CMDL) software, which greatly expands the utility of N-PFPS. Training and support visits were performed at 240 diverse Navy and Marine Corps units. Aviators from units as distant as Spain and Japan attended integrated NavMPS training in the course taught by NavMPS Office personnel at Philadelphia. Deployed NavMPS shipboard technicians provided direct training and operational support during eight extended CV/CVN deployments, representing over three work-years underway with operational forces.

The level and quality of support provided by members of the NavMPS team have been very well received by the operational forces. In FY01, a total of 14 letters of appreciation or formal recognitions was presented to NavMPS Support Office team members. In addition to its traditional work with NavMPS systems, the NavMPS Support Office provided a variety of support to other NAVAIR programs, including logistics support for the Paveway Munitions Planning Tool (PMPT), logistics support and testing of the Real-time Execution Decision Support (REDS) battle management system, and evaluation and training on the *Quiver* threat data base translation software program.



Steve Fox, Head, Naval Mission Planning Systems Support Office



J.C. Fitzgerald, Deputy, Naval Mission Planning Systems Support Office

TACTICAL AUTOMATED MISSION PLANNING SYSTEM (TAMPS)

Role:

- **Systems Engineering**
- **Procurement Support**
- **Installation Planning**
- **Fleet Introduction and Installation**
- **Direct Training Support**
- **Deployed On Site Support**
- **Technical Support Help Desk**
- **Logistics Management**

TAMPS is the singular tool available for planning and programming Navy tactical precision guided munitions. TAMPS provides display of scaled maps used by aviators to obtain terrain elevation data and Controlled Image Base background imagery in both unclassified and classified resolutions. When networked with other shipboard systems, such as the Global Command and Control System-Maritime (GCCS-M) and Precision Targeting Workstation (PTW), TAMPS allows planners to directly access intelligence order of battle and target quality imagery for analysis and Precision Guided Munitions (PGM) employment purposes.

NavMPS Support Office accomplishments with TAMPS include the following:

- Engineering support for the testing of version 6.2.1 in its integration with GCCS-M and PTW data systems.
- Test design, execution, and analysis for Integrated Shipboard Network System (ISNS) certification of TAMPS 6.2.1.



*Chuck Storicks, Logistics Support
Timothy Boyce, Logistics Support
Bob Grant, Fleet Liaison*



*Craig Doster, Logistics Support
Mary Williams, Logistics Support
Judy Jolly, Logistics Support*

- Integration solutions to incorporate N-PFPS capabilities on TAMPS network equipment by application of a variety of COTS/GOTS software and hardware.
- Identification of a significant software incompatibility with currently fielded TAMPS hardware.
- Verification that all current configuration and operational information is included in the System Operation Verification Test (SOVT) conducted with each new installation.
- Updated TAMPS documentation, including maintenance and operator's manuals, training materials, and technical description manuals to support version 6.2.1.
- Direct support of increased fleet F/A-18C capabilities with a software upgrade of TAMPS in conjunction with limited release of next generation aircraft operational flight programming.

The NavMPS Support Office conducted suitability studies to ensure that TAMPS functionality is preserved as hardware evolves and equipment is retired. In this role, the team frequently worked with hardware manufacturers to provide workarounds for equipment incompatibilities. This effort maintains high availability rates, even as fielded systems approach the end of their anticipated service life. A successful proactive approach has resulted in the second consecutive year without any ship or shore based casualty reports (CASREPs) on NavMPS equipment. All upgraded hardware required to field and sustain TAMPS 6.2.1 (including lifetime sparing) was procured this year, minimizing the impact of rapid shifts in COTS production numbers.

TAMPS installations were performed on four aircraft carriers. This work included surveying each ship, establishing configurations compatible with each ship's LAN, reviewing and updating all documentation and drawings, procuring all hardware, and physically installing the equipment. Finally, our team conducted all post installation inspections and certifications. Similar efforts were directed to three schoolhouse installations, bringing the TAMPS training facilities up to Fleet standard.

Extended availability of NavMPS training includes on-site training and support at various fleet replacement squadrons and schoolhouses, during deployment, and with a comprehensive course taught at SSC San Diego C⁴I Programs Office Philadelphia.



*Fran Brown, Logistics Support
John Sheplock, Logistics Support*



*Edward Dolecki, Engineering Support
Dave Salmon, Installations Support*

NAVY PORTABLE FLIGHT PLANNING SOFTWARE (N-PFPS)

Role:

- **Systems Engineering**
- **Procurement Support**
- **Installation Planning**
- **Fleet Introduction and Installation**
- **Direct Training Support**
- **Deployed On Site Support**
- **Technical Support Help Desk**
- **Logistics Management**

Navy Portable Flight Planning Software (N-PFPS) is the preferred system for automated route/mission planning for naval aviators. A fast, intuitive, unclassified software package allows planners to define mission routes and produce kneeboard cards and required briefing materials. N-PFPS is the only system currently providing certified fuel calculations for most naval aircraft. N-PFPS can display the same map, terrain, and background imagery as TAMPS. With the advent of the CMDL and specific software applications, N-PFPS provides download capability for most non-PGM missions.

NavMPS Support Office accomplishments with N-PFPS include the following:

- System engineering to develop a standardized delivery for NavMPS PCs that are pre-configured with disk images that are compatible for either locked or open network environments.
- Test design, execution, and analysis for Integrated Shipboard Network System (ISNS) certification of N-PFPS 3.1.1, N-PFPS 3.1.2, and CMDL.
- Support to PMA-233 in the selection of new computers and printers for the FY01 and FY02 procurements of NavMPS hardware.
- N-PFPS 3.1.1, N-PFPS 3.1.2 and CMDL software distribution to 539 separate locations.
- Flight Performance Modules (FPM) distribution as they were certified.

SSC San Diego C⁴I Programs Office Philadelphia procured, integrated, and delivered over 800 N-PFPS systems to Navy and Marine Corps operational and training units. The NavMPS Support Office developed plans for a NavMPS Map Server, which provides an approach to handling network sharing of N-PFPS map data. A prototype system is under development by the NavMPS Support Office System Engineering group.

Dispatched and regionally stationed training and installation teams provided direct support to individual units with system installations, upgrades, and operator training. Regional and Philadelphia-based personnel visited all NavMPS equipment sites to evaluate and upgrade laptop computer memory and to perform firmware upgrades to over 350 Mission Data Loader Receptacles.

JOINT MISSION PLANNING SYSTEM (JMPS)

Role:

- **Systems Engineering**
- **Installation Design**
- **Requirements Analysis**
- **Logistics Management**

Joint Mission Planning System (JMPS) is a new system in development, which will replace both TAMPS and N-PFPS. JMPS will combine the speed and usability of N-PFPS with the data access capabilities of TAMPS. Major efforts are being made to include the user community to define both the interface and performance requirements of JMPS. System engineering for JMPS computer security issues include evaluating NSA Windows 2000 Security Guidelines and comparing the NSA guide to the JMPS Security Target to ensure that deployed versions of JMPS meet approved security guidelines. SSC San Diego C⁴I Programs Office Philadelphia is developing the testing plan to guide JMPS through the ISNS certification process.

The NavMPS Support Office provides hardware engineering that includes requirement identification for a proposed JMPS server and evaluation of current hardware for compliance with the proposed JMPS performance specifications. A key participant in the JMPS sustainment tiger team, the NavMPS Support Office leads in the design of the overall JMPS sustainment program. Results of this work have already been incorporated into the JMPS development process. The development of JMPS documentation and training for the July 2003 introduction of JMPS is underway.

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IMAGERY SUPPORT OFFICE

SSC San Diego C⁴I Programs Office Philadelphia provides a complete range of services including design, development, hardware and software customization, system integration, installation, training, technical support, and life cycle management for the Digital Photo Lab (DPL), legacy photo systems and Digital Camera Receiving Station (DCRS) systems, digital hand-held cameras, and digital photographic production techniques.

The Imagery Support Office is the In-Service Engineering Activity (ISEA) and provides engineering, logistics, acquisition, installation, training, and life cycle support for the following programs. The DPL is a computerized digital photography suite using the commercial off-the-shelf, non-development item (COTS NDI) concept. The DPL affords a full range of digital photographic processes and promotes the interchange of digital photographic files with other shipboard and combat camera systems. Using modern state-of-the-art computer technology, DPL improves U.S. Navy imagery by augmenting Visual Information, Public Affairs Office, Surface Surveillance Contact, and other photographic functions.

The DCRS is a digital imaging computer workstation that acts as the receive element for digital imagery from the F-14 Fast Tactical Imagery (FTI) system. The DCRS provides a two-way, near real-time digital imagery link of manned tactical reconnaissance from the F-14 aircraft. The DCRS capabilities include high resolution video digitizing, National Image Transmission Format (NITF) conversion, a shipboard radio communications interface, and a local area network (LAN) interface for imagery dissemination within the aircraft carrier intelligence center (CVIC).

The Imagery Support Office retains Legacy Photo Systems. Fleet Photo Support provides direct support to NAVSEA and TYCOM's for conventional wet-chemistry photo labs onboard naval vessels. The Analytic Photogrammetric Positioning System (APPS) is a hardcopy film and light table system providing precision mensuration and stereo viewing capability using prepared imagery and supporting data.



*Tim Urbanski, Head,
Imagery Support Office*

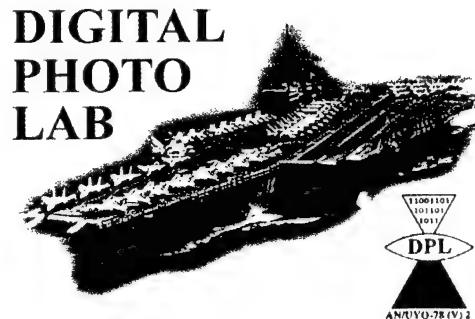


*Dennis Lloyd, Deputy
Imagery Support Office*

DIGITAL PHOTO LAB AN/UYQ-78(V)

Role:

- **System Design and Integration**
- **Procurement Support**
- **Documentation Preparation**
- **System Training**
- **Life Cycle Support**
- **Configuration Management**



SSC San Diego C⁴I Programs Office Philadelphia personnel designed the shipboard-mounted DPL system, and with approval from NAVSEAPMS-312, the production version DPL AN/UYQ-78 was installed onboard all active CV/CVN class aircraft carriers. NAVSEA PMS-377 authorized installation of the DPL AN/UYQ-78 (V)1C onboard the *USS Boxer* (LHD 4), the *USS Bataan* (LHD 5), and the *USS Bonhomme Richard* (LHD 6). The Next Generation DPL, which includes non-linear editing capabilities, was installed onboard the *USS Iwo Jima* (LHD 7).

A significant benefit of this program is the reduction of shipboard photo chemical overboard discharge to assist in fleet compliance with Environmental Protection Agency regulations. Use of the DPL allows photo production to continue while in port, in non-discharge zones, and in remote locations that have limited fresh water. The DPL program is divided into distinct phases to allow a multi-level approach to the conversion of existing wet-chemical photo labs with the flexibility to provide different configurations of the DPL for various classes of U.S. Navy vessels.

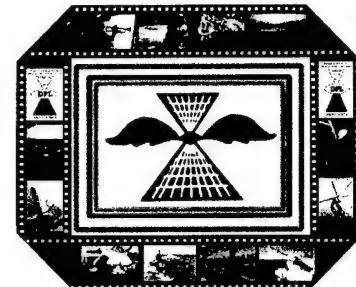
The Next Generation DPL, the DPL AN/UYQ-78 (V)3, was installed onboard the *USS Nimitz* (CVN 68) to organize the workflow process in the CV/CVN photo labs. This system encompasses six workstations, a dedicated high-speed photo LAN, and digital non-linear editing capabilities. The DPL AN/UYQ-78 (V)2X was developed to facilitate the incorporation of video editing in the CV/CVN photo labs as a step towards the Next Generation functionality. This interim system consists of two or more workstations, a dedicated high-speed photo LAN, and digital non-linear editing capabilities. Carriers upgraded in FY01 include the *USS Enterprise* (CVN 65), the *USS Carl Vinson* (CVN 70), the *USS Theodore Roosevelt* (CVN 71), and the *USS John C. Stennis* (CVN 74).

SSC San Diego C⁴I Programs Office Philadelphia supported meetings with NAVSEA PMS-312 and PMS-377, PEO(T) PMA-241, and Chief of Naval Operations (CNO) N09C1. Three-hundred and nineteen telephone assistance requests, one-hundred and seventy-five email assistance requests, and forty on-site technical support requests were handled. Five Combat Systems Readiness Assessments (CSRA) and four Combat System Pre-Acceptance Test (CSPAT) were conducted, and two Casualty Reports (CASREPs) were resolved.

FLEET PHOTO SUPPORT

Role:

- **Engineering and Design Support**
- **Acquisition Support**
- **Integrated Logistics Support**
- **Fleet Support**



The Fleet Photo Support project provides support for conventional wet-chemistry photo labs onboard naval vessels. SSC San Diego C⁴I Programs Office Philadelphia supports new construction and existing sites with engineering, design, acquisition, integrated logistics, and on-site technical support. During FY01, new ship construction support was provided to NAVSEA PMS-312 and NAVSEA PMS-377. The Imagery Support Office provided LAN connectivity on the DPL Unclassified LAN for existing ship conventional wet-chemistry photo processors onboard the *USS Enterprise* (CVN 65), the *USS Carl Vinson* (CVN 70), the *USS Theodore Roosevelt* (CVN 71), and the *USS John C. Stennis* (CVN 74). Three silver recovery systems were installed onboard the *USS Nimitz* (CVN 68). The EH-38 wet chemistry photo lab was relocated and refurbished at the Naval Strike and Air Warfare Center (NSAWC).

The Imagery Support Office provided on-site technical support for EH-38D processors and other Tactical Aircraft Reconnaissance Pod System (TARPS) film processing equipment onboard seven U.S. Navy aircraft carriers and one shore site. Two Combat Systems Readiness Assessment (CSRA) and one Combat System Pre-Acceptance Test (CSPAT) were conducted, and four Casualty Reports (CASREP) were resolved.

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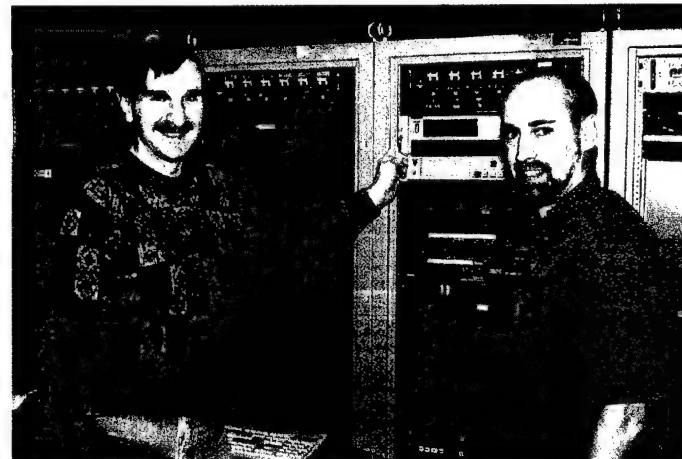
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SSC San Diego

C⁴I Programs Office

Philadelphia



*Paul Steinbacher, Logistics Support
Charles Soule, Logistics Support*

DIGITAL CAMERA RECEIVING STATION (DCRS)

Role:

- **System Design and Integration**
- **Procurement Support**
- **Documentation**
- **Training**
- **Life Cycle Support**
- **Configuration Management**



In FY96, the Program Executive Office for Tactical Aircraft (PEO(T)) PMA-241 tasked SSC San Diego C⁴I Programs Office Philadelphia and the Naval Air Warfare Center - Aircraft Division, Indianapolis (NAWC-AD Indy) to design capability for near real-time digital imagery in the existing Tactical Air Reconnaissance Pod System (TARPS) pods and associated F-14 aircraft. Working together, SSC San Diego C⁴I Programs Office Philadelphia developed a shipboard receiving station and NAWC-AD Indy developed airborne image transmission capability.

The first DCRS was installed onboard the *USS Theodore Roosevelt* (CVN 71) to support VF-32 during deployment. The DCRS performed as designed, and numerous missions were flown successfully. Based on these missions, CNO N78 formalized this program as a modification to operational requirement TW-30. In April 1997, CNO N78 hosted a TARPS(DI) and DCRS demonstration with reconnaissance flights over the Pentagon resulting in the formal announcement of Initial Operational Capability (IOC) for TARPS(DI) and DCRS. An interface was established with the Global Command and Control System – Maritime (GCCS-M) system to allow rapid movement of imagery to the JOTS14 workstation.

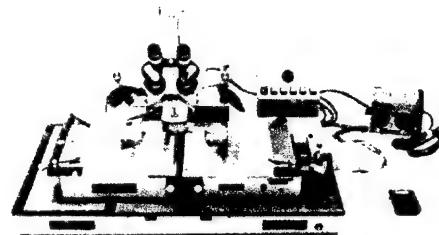
In FY01, the Imagery Support Office team provided support to the Army during the Roving Sands/Purple Dragon Exercise for the receiving of Fast Tactical Imagery (FTI) from tactical F-14 aircraft acting as Forward Air Controllers to an Army Tactical Exploitation System (TES) and Army Common Ground Station (CGS). Missions were supported with FTI imagery transmitting to the TES, located at Fort Bragg, North Carolina, and the CGS located at Camp Lejeune, North Carolina. The TES and CGS successfully transmitted National Imagery with Precision Guided Weapons (PGW) quality coordinates to the tactical F-14 aircraft for the prosecution of targets. The team also supported a PMA-241 technology demonstration of F-14 Synthetic Aperture Radar (SAR) imagery transmission via FTI to a Portable-DCRS.

SSC San Diego C⁴I Programs Office Philadelphia supported PEO(T) PMA-241 in FY01 by handling 83 telephone assistance requests, 40 email assistance requests, and 40 on-site technical support requests. Six CSRAs and three CSPATs were conducted, and one CASREP was resolved.

ANALYTICAL PHOTOGRAHMETRIC POSITIONING SYSTEM (APPS)

Role:

- Depot Maintenance
- Inter-Service Support
- Configuration Management



The Analytical Photogrammetric Positioning System (APPS) is a stand-alone transportable light table and stereoscopic viewing system. The APPS utilizes prepared hard copy imagery and supporting Point Positioning Data Bases (PPDB) to provide precision mensuration data consisting of geographic position, datum conversions, distances, angular displacement, heights, and elevation from features shown on the imagery. The derived data are used for mission planning.

SSC San Diego C⁴I Programs Office Philadelphia is the APPS Depot Maintenance Inter-Service Agreement (DMISA) agent providing on-site and depot level service for approximately 53 units used by the USAF and the USN. The APPS DMISA contract will be continued until the transition to digital imagery and support data is complete.

During FY01, the majority of the APPS service was provided to the USAF. On-site technical support was provided at 13 USAF CONUS sites, 14 USAF overseas sites, and one USN shore site.

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and Eddie Smith, Engineering Support*

NATIONAL IMAGERY AND MAPPING AGENCY (NIMA) SUPPORT OFFICE

The Image Product Library (IPL) Program is a National Imagery and Mapping Agency (NIMA) sponsored effort to develop the standard United States Imagery and Geospatial Systems (USIGS) product archive system. This system was part of the NIMA's Pilot Accelerated Architecture Acquisition Initiative (A³I) for enhanced digital imagery request, distribution, and management for all echelons within the National and DoD Imagery/Intelligence community. The objective of the Pilot A³I was to quickly transition enhanced capabilities to the field forming the basis for the USIGS architecture.

The IPL provides the capability to supply image products to intelligence analyst users and non-intelligence users from assets at selected imagery intelligence (IMINT) production centers. IPL provides browser capability to query image product holdings at IMINT production centers and/or other IPLs to determine what image products are available to satisfy the user's needs. Users select an image product; indicate transfer parameters, which influence image product format and compression ratio; and request transfer of the product. The IPL browser workstation then receives the image product and notifies the user that the image product is available. The IPL also provides the capability to receive image products in National Imagery Transmission Format (NITF), Tape Format Requirement Documents (TFRD) format, or selected additional commercial formats and enter them in the Image Product Database. The IPL Manager has functions available for database maintenance and management.

The NIMA Support Office provided IPL technical support and Customer Support Services for the IPL systems. Our Customer Support Team maintained a toll free international access number for customer support; logged and tracked all requests for support; submitted formal trouble reports, as required; provided 24-hour 7-day per week support to troubleshoot and resolve technical problems; monitored results to ensure that problems were accurately tracked to resolution; and analyzed the nature of problems and reported trends.



Vivian Di Cristofaro, Head, National Imagery & Mapping Agency Support Office

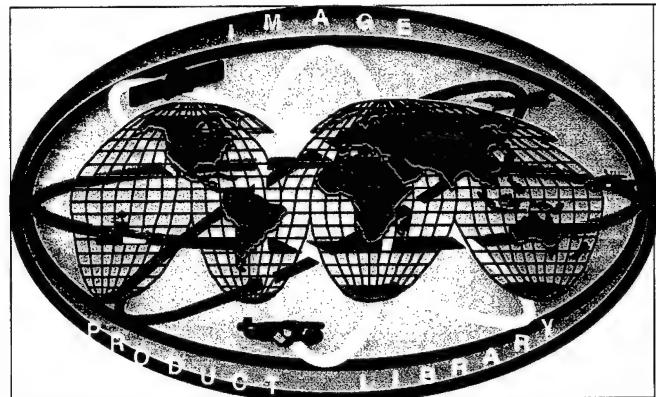


Frank Greco, Deputy and Installation Team Lead

IMAGE PRODUCT LIBRARY (IPL)

Role:

- **Installation**
- **Customer Support**
- **Hardware Engineering**
- **System Acquisition**
- **System Assembly, Configuration, Integration, and Installation**
- **Logistics Support**
- **Training**
- **Configuration Management**
- **Life Cycle Support**



SSC San Diego C⁴I Programs Office Philadelphia's involvement in the IPL program began in 1997 with our initial funding from the NIMA program office. During FY01, SSC San Diego C⁴I Programs Office Philadelphia received continued tasking to execute the efforts necessary to initiate and maintain IPL in the field. The DoD Intelligence Information System Management Board certified the newest baseline of the software, IPL version 2.5, to field on 26 November 2000 and approved a major enhancement to the baseline, IPL version 2.5.1, in February 2001. A new release, IPL version 3.0 is currently undergoing testing in preparation for fielding in FY02.

Sources of imagery include National, Theater, Tactical, and Commercial assets that support producer and war fighter needs at all required levels. IPL provides imagery dissemination worldwide within the USIGS Archive and Dissemination Element of the NIMA Libraries. IPL will become the Image Analyst's primary tool for supporting the storage and dissemination of imagery and imagery-based products worldwide. IPL provides the imagery community with improved accessibility, operational support, and distribution of geospatial and imagery products. To achieve this mission, IPL provides an automated capability to support the following activities:

- Query image product holdings from multiple sources,
- Receive imagery and/or image products from multiple sources,
- Maintain a database of imagery and/or image products,
- Transfer imagery and/or image products to imagery clients from imagery sources,
- Transfer imagery to remote locations using several formats and compression ratios.

IPL provides the server software necessary to implement the IPL mission, supports client searches/requests for applicable imagery and image products, and provides information on the status of requests/transfers. IPL interfaces with other imagery sources (IESS, 5D, etc.) to enable the client to conduct queries of imagery holdings and requests, and receive the imagery.

SSC San Diego C⁴I Programs Office Philadelphia provided Site Introduction Teams to install the IPL software and hardware at sites located in both CONUS and abroad. These teams performed site surveys, delivered and installed IPL software on site equipment, configured site systems to support specialized end user requirements, and migrated site imagery databases to the IPL environment. Site Introduction Teams also provided hardware installation support at numerous operational sites where they installed IPL hardware procured through SSC San Diego C⁴I Programs Office Philadelphia and integrated it into the existing site network architecture. The NIMA Support Office team also provided on-the-job training for IPL operators, delivered supporting documentation required by the site for IPL use/support, reported observed IPL and/or site problems and discrepancies, and reproduced deliverable software from master electronic media.

Site Introduction Teams provided technical support to sites and the Help Desk, supported site security certification, and provided shipboard installation planning and coordination. During FY01, the NIMA Support Office performed 41 on-site IPL software installations and 54 hardware installations. The teams also performed site acceptance testing, training, and technical support. In addition to the standard IPL installation support provided for the program, our Site Introduction Teams were responsible for the rapid deployment of the IPL version 2.5.1 to operational Navy vessels. This capability was part of a coordinated installation effort to upgrade all software for JSIPS-N Systems to accommodate NIMA sensor changes.

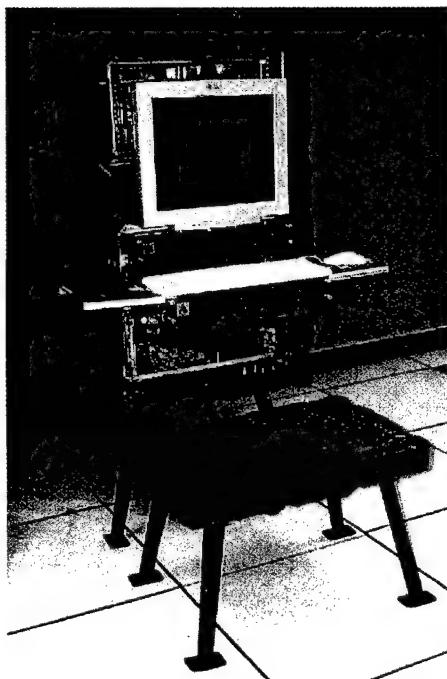
The NIMA Support Office Engineering Team provided hardware engineering support to the IPL program including hardware definition, requirements definition, installation guidance package planning, site checks, and system installation parameter definition. With the support of our resource management personnel, this team provided procurement support to NIMA for the acquisition of hardware and COTS software and licenses for the IPL program. This effort incorporated the tasks necessary to cost, purchase, track, and warehouse the Non-Development Item (NDI) system components identified by the IPL program. The team performed hardware assembly, configuration, and integration; system and program software installation; software/hardware integration; IPL system testing prior to field introduction; and equipment receipt, inventory, storage, shipment packaging, and shipping. Our engineering support



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team developed a transportable IPL system architecture to meet the requirements of forward deploying operational units. The system is ruggedized and packaged to be transported in an operational environment to provide the unit with situational awareness by networking the command with imagery archives at national and command imagery centers.

During FY01, SSC San Diego C⁴I Programs Office Philadelphia procured 133 complete IPL systems in either a medium configuration (Sun 4500), a small configuration (Sun E450), or a transportable configuration (Sun E420R). The NIMA Support Office also assembled, configured, integrated, shipped, and installed 88 systems. Ten of the installations were performed on Navy vessels and 78 at land-based sites supporting Common Imagery Ground Station Surface (CIGSS) and Joint Task Force (JTF) tasking.

SSC San Diego C⁴I Programs Office Philadelphia provided IPL

Logistics Support, which includes documentation generation and assessment (logistics planning, training, certification, testing, user documents), and sparing assessment for hardware acquisitions. The NIMA Support Office Logistics Team supported system configuration management and tracking by providing hardware and software status accounting of user sites, and inventorying and tracking IPL hardware acquisitions in the Configuration Management (CM) database.

The NIMA Support Office provided interim support for IPL elements not covered by extended warranty or service agreement and set up and maintained our interim depot, failure tracking and analysis, and hardware technical support for this effort. SSC San Diego C⁴I Programs Office Philadelphia continued to support our established IPL spares depot at FedEx, Memphis, Tennessee, which was developed in conjunction with the JSIPS-N program depot to provide integrated JSIPS-N/IPL Navy Logistics support. SSC San Diego C⁴I Programs Office Philadelphia developed the Navy's spares and documentation requirements for shipboard systems and purchased and delivered the pack-up kits to the ships in support of the PMA-281 ILS certification program. During FY01, four shipboard pack-up kits and documentation sets were delivered in support of the Navy's ILS Certification Program.

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SSC San Diego C⁴I Programs Office Philadelphia



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GLOSSARY OF ACRONYMS

A ³ I	Accelerated Architecture Acquisition Initiative
AGF	Command Ship
AOSD	Afloat Operations Support Detachment
APL	Allowance Parts Lists
APPS	Analytical Photogrammetric Positioning System
APS	Afloat Planning System
ASO	Administration Support Office
ATACS	Advanced Tactical Air Command System
ATM	Asynchronous Transfer Mode
BESEP	Basic Electronic System Engineering Plan
BF	Battle Force
BG	Battle Group
BPA	Basic Purchasing Agreement
C ²	Configuration Consolidation
C ⁴ I	Command, Control, Communications, Computers, and Intelligence
CASREP	Casualty Report
CBT	Computer Based Training
CFA	Cognizant Field Activity
CG	Cruiser
CGS	Common Ground Station
CHBDL	Common High Bandwidth Data Link
CIGSS	Common Imagery Ground Station Surface
CINCLANTFLT	Commander In Chief, Atlantic Fleet
CINCPACFLT	Commander In Chief, Pacific Fleet
CM	Configuration Management
CMDL	Common Mission Data Loader
CMSA	Cruise Missile Support Activity
CMSALANT	Cruise Missile Support Activity, Atlantic
CMSAPAC	Cruise Missile Support Activity, Pacific
CMSAUK	Cruise Missile Support Activity, United Kingdom
CNET	Chief of Naval Education and Training
CNO	Chief of Naval Operations
COMFIFTHFLT	Commander, U.S. Fifth Fleet
COMNAVAIRLANT	Commander, Naval Air Force, Atlantic
CONUS	Continental United States
COR	Contracting Officer's Representative
COTS	Commercial Off-the-Shelf
COTS NDI	Commercial Off-the-Shelf Non Development Item
CPU	Computer Processing Unit
CSPAT	Combat System Pre-Acceptance Test
CSRA	Combat Systems Readiness Assessment
CV	Aircraft Carrier
CVIC	Aircraft Carrier Intelligence Center
CVN	Aircraft Carrier Nuclear
DAPS	Defense Automated Printing services
DCRS	Digital Camera Receiving Station
DIWS	Digital Imagery Workstation Suite

DIWSA	Digital Imagery Workstation Suite Afloat
DLA	Defense Logistics Agency
DMISA	Depot Maintenance Inter-Service Agreement
DoD	Department of Defense
DPL	Digital Photo Lab
ECP	Engineering Change Proposal
ECU	Environmental Control Unit
ERP	Enterprise Resource Planning
ESC	Electronic Systems Command
FBE	Fleet Battle Experiment
FedEx	Federal Express
FISC	Fleet and Industrial Supply Center
FIT	Fleet Installation Team
FITCPAC	Fleet Intelligence Training Center, Pacific
FMS	Foreign Military Sales
FPM	Flight Performance Module
FTI	Fast Tactical Imagery
FY	Fiscal Year
GCCS-M	Global Command and Control System – Maritime
GENSER	General Service
GOTS	Government Off-the-Shelf
HPO	High Performance Organization
ICAPS	Interactive Computer Aided Provisioning System
ICD	Installation Control Drawings
IESS	Imagery Exploitation Support System
ILS	Integrated Logistics Support
IMINT	Imagery Intelligence
IMPAC	International Merchant Purchase Authorization Card
IOC	Initial Operational Capability
IPA	Image Product Archive
IPL	Image Product Library
ISEA	In-Service Engineering Activity
ISNS	Integrated Shipboard Network System
IT-21	Information Technology for the 21 st Century
JCA	JSIPS-N Concentrator Architecture
JMPS	Joint Mission Planning System
JOTS	Joint Operational Tactical System
JSIPS-N	Joint Service Imagery Processing System – Navy
JTF	Joint Task Force
LANT	Atlantic
LAN	Local Area Network
LCC	Amphibious Command Ship
LCM	Life Cycle Manager
LCMR	Lieutenant Commander
LHA/LHD	Amphibious Assault Ships
LPMP	Launch Platform Mission Planning
LSL	Logistics Support Library

MDS	Mission Distribution System
METOC	Meteorological/Oceanographic
MILSPEC	Military Specification
MILSTRIP	Military Standard Requisition and Issue Procedures
MPS	Mission Planning System
NAVAIR	Naval Air Systems Command
NavMPS	Naval Mission Planning System
NAVSEA	Naval Sea Systems Command
NAVSUP	Naval Supply Systems Command
NAWC-AD	Naval Air Warfare Center – Aircraft Division
NDI	Non-Development Item
NELO	Naval Electronic Logistics Office
NIMA	National Imagery and Mapping Agency
NITF	National Imagery Transmission Format
NMITC	Navy and Marine Corps Intelligence Training Center
NNS	Newport News Shipbuilding
N-PFPS	Navy Portable Flight Planning Software
NPS	NIMA Product Server
NRNASC	Naval Reserve Air System Command
NSA	National Security Agency
NSA	Naval Support Activity
NSAP	NSA Philadelphia
NSAWC	Naval Strike and Air Warfare Center
NSWPC	Naval Strike Warfare Planning Center
NWCF	Navy Working Capital Fund
NWPC	Navy Washington Planning Center
ONI	Office of Naval Intelligence
OT	Operational Test
PAC	Pacific
PDF	Portable Document Format
PEO(T)	Program Executive Officer, Tactical Aircraft Programs
PEO(W)	Program Executive Officer, Strike Weapons and Unmanned Aviation
PGM	Precision Guided Munitions
PGW	Precision Guided Weapons
PIF	Prototype Integration Facility
PKI	Public Key Infrastructure
PMA	Program Manager for Aircraft
PMPT	Paveway Munitions Planning Tool
PMR	Program Management Review
POC	Point of Contact
PPDB	Point Positioning Data Base
PPL	Preferred Products List
PTW	Precision Targeting Workstation
PUK	Pack Up Kits
RAID	Redundant Array of Independent Disks
RDS	Rapid Deployment Suite
REDS	Real-time Execution Decision Support

SAP	Special Access Program
SAR	Synthetic Aperture Radar
SAT	System Acceptance Testing
SCIF	Sensitive Compartmented Information Facility
SDX	Secure Data Transfer
SEL	Select
SEWG	System Engineering Working Group
SHIPALT	Ship Alteration
SID	Ships Installation Drawing
SIPRNET	Secret Internet Protocol Router Network
SIS	SCI Isolation Segment
SITF	Strike Interface Test Facility
SMART	Shipboard Modularity Arrangemet Reconfiguration Technology
SOVT	System Operation Verification Test
SPA	Strike Planning Archive
SPAWAR	Space and Naval Warfare
SSC	SPAWAR Systems Center
SWATSLANT	Strike Warfare and Tactics School, Atlantic
TAMPS	Tactical Automated Mission Planning System
TARPS	Tactical Air Reconnaissance Pod System
TARPS (DI)	Tactical Air Reconnaissance Pod System (Digital Imagery)
TES	Tactical Exploitation System
TFRD	Tape Format Requirement Documents
TIS	Tactical Input Segment
TLAM	Tomahawk Land Attack Missile
TMPC	Tomahawk Mission Planning Center
TMPS	Tactical Mission Planning System
TOA	Total Obligational Authority
TPS	Tomahawk Planning System
TSCM	Tomahawk Strike Coordination Module
TTIS	Transit Case Tactical Input Segment
TYCOM	Type Commander
UK	United Kingdom
ULSS	User Logistic Support Summary
USAF	United States Air Force
USIGS	United States Imagery and Geospatial System
USMC	United States Marine Corps
USN	United States Navy
VTC	Video Teleconference
WPC	Washington Planning Center

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14. ABSTRACT SSC San Diego C ⁴ I Programs Office Philadelphia is responsible for a program of development, in-service engineering, procurement, installation support, configuration control, and integrated logistics support for shipboard and shore-based Command, Control, Communications, Computer and Intelligence (C ⁴ I) systems, mission planning systems, and electronic photographic processing systems. SSC San Diego C ⁴ I Programs Office Philadelphia provides technical support for the Naval Air Systems Command, Naval Electronic Logistics Office, Naval Sea Systems Command (PMS-312/PMS-377), and the National Imagery and Mapping Agency. Headed by a civilian manager, SSC San Diego C ⁴ I Programs Office Philadelphia comprises 64 civilians including engineers, computer specialists, intelligence operations specialists, technicians, logisticians, and management support personnel, practicing total quality management and ensuring the quality process is routinely used. Engineering and technical support is provided by 180 contractor personnel. This report describes technical accomplishments and cites awards and recognition received by SSC San Diego C ⁴ I Programs Office Philadelphia during fiscal year 2001.						
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